GARDENS IN MUGHAL INDIA

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Introduction: Evolution of Sources

The Mughal court culture was essentially urban in nature and garden was an integral element of urban living in Mughal India where rulers, aristocrats and elite class enjoyed comfortable, pleasant and aesthetic surroundings. It was the Mughals, specifically Babur, the founder of the Mughal Empire, who started the tradition of well-laid out garden, termed *chaharbagh,* which was copied, improved and modified by his successors.

The Persian literati, especially in poetic form, used the terms '*gulistan'* and '*bustan'* for flower garden. The Persian word '*gulistan'* is formed from '*gul'* for rose or flower, and '*bustan'* from '*bu'* for smells or perfume. But both these Persian words in Arabic are used in the sense of garden. Besides, the words '*gulshan'* or '*chaman'* are also found in the sources. Again, the Persian word '*gulshan'* (*gul*/flower) stands for rose or flower garden, while '*chaman'* denotes flower beds or parterre. In general, Persian term '*bagh'* has been used by the Mughal chroniclers for orchard, grove and garden. Since the term also denotes cluster of trees or much plantation, it translates, in real sense, the Mughal garden. Even inscriptions invariably mention the term '*bagh'* for gardens which attests to its official acceptance. The synonym to Persian '*bagh'* was the Hindi term '*bari'* in Gujarat and Rajasthan.

Garden poetry or imagery may be understood well from the name of the two poetic compositions '*Gulistan'* and *'Bustan'* of the great Persian poet Sa'adi of Shiraz (1184-1291 AD) in which the former stands for 'flower garden' while the latter indicates 'fruit garden'.[1] In Mughal India, the same garden imagery has been found in Chandra Bhan Munshi's work *Chaharchaman*, meaning 'four gardens'. The book has been divided and arranged in four *chamans* (sections). One of the biographers of Chandra Bhan interprets that it was not a mere coincidence that Chandra Bhan decided to name his magnum opus prose *Chahar Chaman*, rather it was a deliberate attempt to nod to the power of *chaharbagh* as an imperial and paradisiacal metaphor.[2] Thus, indeed it was the

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[1] Elizabeth B. Moynihan, *Paradise as a Garden in Persia and Mughal India,* (New York, 1970), p. 44.

[2] Rajeev Kumar Kinra, *Secretary-Poets in Mughal India and the Ethos of Persian: The case of Chandar Bhan Brahman,* Ph.D Dissertation submitted to the Deptt. of South Indian Languages

influence of dominant garden culture, especially the concept of *chaharbagh* system which migrated from Persia to Mughal India, that the name of this scholarly work was related to the gardens.

In India, garden culture goes back to ancient times in which plants and flowers have been cultivated. Indians laid out gardens from the small '*batika'* to large '*udyan'* but architecture was not related to the gardens the way it was during the Mughals times. There is multitude of references of gardens in early Buddhist and Sanskrit literature but apparently they were simply a lush-green gardens or sacred groves.[3] In medieval period, the Delhi Sultans maintained and constructed gardens in India. Sultan Firozshah Tughlaq has been credited for maintaining the garden of Alauddin Khalji. He himself laid out innumerable gardens in the vicinity of Delhi and at other places. [4]

The Mughal historians showed their contempt for the gardens of the Sultanate period since they were not well laid-out or symmetrical gardens. Abu Fazl in his *Ain* remarks that 'formerly peoples planted their gardens without any order but since Babur's arrival in India, more methodological arrangement of garden was done'.[5] Abul Fazl's account finds support in Ahmad Yadgar's statement that 'plan with pathways' (*tarhabandi-i khiyaban*) in the context of Hindustan was the most salient and revolutionary feature of Babur's first garden at Agra which was known as *Hasht Bihisht*

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and Civilizations, Chicago, Illinois, 2008. pp. 160-63. Chandra Bhan was in an age when *chararbagh* building tradition reached on its zenith, starting from Babur's *chaharbagh* to Shah Jahan's Taj. Incidentally, Agra became his home and he also laid out his lesser known garden, named *Bagh-i Chandra Bhan.* It is said that he started his administrative career under Mir Abd al Kalam, who was the superintendent of buildings in his hometown Lahore and eventually became one of the important supervisors of Taj Mahal. Literally, *Chaharchaman* and *chaharbagh* mean 'four gardens' but technically *chaman* referred either to the central plot of the *chaharbagh* or any of the plots in the *chaharbagh.*

[3] C.M. Villiers Stuart, *Gardens of the Great Mughals*, (London, 1913), pp. 3-4; Daud Ali & Emma J. Flatt, ed., *Gardens and Landscape Practices in Pre-Colonial India: Histories from the Deccan,* (New Delhi, 2012), pp. 18-38.

[4] Cf. Shams Siraj Afif, *Tarikh-i Firozshahi*, (Calcutta, 1890), pp. 127, 295. For the gardens of Delhi Sultanate, also see Anthony Welch, 'Gardens that Babur did not like: Landscape, Water and Architecture for the Sultans of Delhi', in James L. Wescoat Jr. and Joachim Wolschke-Bulmahn, ed., *Mughal Gardens: Sources Places, Representations and Prospects*, (Washington, 1996), pp. 59-94.

[5] Abdul Fazl, *Ain-i Akbari*, ed. Syed Ahmad Khan, Nawal Kishore edition, (Lucknow, 1882), I, p. 65.

(Garden of eight Paradise). It was the first example of the plan with walkways in Hindustan. On the pattern of this garden, Mirza Kamran built another garden at Lahore.[6] Babur in his autobiography himself expressed his dissatisfaction with the 'irregular arrangement of the land' and 'lack of running water' and ordered that garden should be made 'orderly (*siyaq-dar)* and symmetrically (*tarh-dar*)' with running water through the means of wheels (*charkhaha*).[7] Thus, Babur started a revolution in the field of gardening in India through building *chaharbagh* (fourfold)-symmetrical gardens. In recent writings, the excessive use of the term '*chaharbagh'* in interpretation of the Mughal gardens has been questioned since it has been found that the Mughal gardens had not always been symmetrical.

The inspiration for the splendid garden-building tradition by the great Mughals was drawn from their Turko-Mongol heritage. In Iran, the Persianate gardens (also called Islamic or Paradise gardens) originated from the *pairidaeza*[8] of Cyrus at Pasragadae and travelled through Achaemanian Empire to Sassanian glory to Safavids' splendor down to Central Asian submission.[9] On the other hand, it is also believed that the Persian gardens are essentially an earthly representation of Paradise as mentioned in the *Quran*. So many symbolism of *Quranic* Paradise are interpreted or related to gardens, such as four rivers of Paradise in geometrically-divided water channels, eight division of Paradise in octagonal pools, and fruits and shady trees etc.[10] However, modern scholars have come to the conclusion that *chaharbagh* gardens existed in Persia since the Achaemanian period, much before the advent of Islam.

[6] Ahmad Yadgar, *Tarikh-i Shahi*, ed., M. Hidayat Hussyn, (Calcutta, 1939), pp. 120-21.
[7] Zahiruddin Muhammad Babur, *Baburnama*, literal Persian translation by Abdur Rahim Khan-i Khanan, (Bombay, 1890), p. 210.
[8] *Pairidaeza* is an old Persian word meaning 'walled garden' (Moynihan, *Paradise as a Garden*, p. 1).
[9] See details of the garden-building tradition of Achaemanians, Sassanians, Safavids and Arabs in David Stronach, 'Parterres and Stone Watercourses at Pasargadae: Notes on the Achaemenid Contribution to the Evolution of Garden Design', *Journal of Garden History*, (I994), vol.14, pp. 3-2; Ralph Pindor Wilson, 'The Persian Garden *Bagh* and *Chaharbagh'*, in Elisabeth MacDougall and Richard Ettinghausen, ed., *Islamic Garden*, (Washington DC, 1976); pp. 71-85; Moynihan, *Paradise as a Garden*.
[10] Ettinghausen, *Islamic Garden*, pp. 1-2.

The ancient gardens in Iran were simply *chaharbagh* in style with natural elements but were never adorned by buildings. It was only after the advent of Islam that buildings have been built in the gardens on the line of the *Quranic* injunction that palaces like buildings would be there in Paradise garden.[11] Timur (1336-1404AD), greatly influenced by the Persian gardens, ordered to build palaces and gardens with some of his own distinctive innovations and gave the name *Hasht Bihisht* to one of them.[12] *Quranic* garden with all its symbolism has been widely discussed by the scholars like Ettinghausen and Annemarie Schimmel but they have not discussed the presence of buildings in it. This lacuna has also received criticism, since buildings were one of the essential features of the Mughal gardens.

Gardens in Mughal India were invested with a lot of symbolic meanings and were often represented as imitations, however miniscule, of the heaven. The purposeful inclusion of some features of *Quranic* Paradise was purely meant for making the gardens most beautiful as well as to exhibit the political power of the king above all in the earthly Paradise. The Mughals also assimilated inti their gardens certain features of the gardens of Hindu tradition in India. The contribution of the Hindu influence is evident not only in the physical features, such as lotus-shaped pools, lotus-bud fountains, marble swings, the surface decoration of garden pavilions and other structures, but also in the unique contribution of the planting of Indian native trees such as avenues of tamarinds, groves of mangoes and free-standing areca nut palms.[13] Rajput style of planting with mortar packed cavities may have influenced Mughal gardening as it was visible in Rai Pravin garden of Orcha, built by Bir Singh Bundela (1605-27 AD), as well as in Anguri

[11] Abdullah Yusuf Ali, *The Meaning of the Holy Quran,* (New Edition with Qur'anic Text (Arabic), Revised Translation, Commentary and Newly Compiled Comprehensive Index), 10th edition, Reprinted, (Maryland, U.S.A., 2004), 9:72; 39:20; 61:12.

[12] Lisa Golambek, 'The Gardens of Timur: New Perspective', *Muqarnas,* (1995), vol. XII, p.137-47.

[13] Hindu influence on Mughal gardens has been well studied by Villiers Stuart and Elizabeth Moynihan. For details see, Villiers Stuart, *Gardens of the*; Moynihan, *Paradise as a Garden;* Idem, 'The lotus Garden Place of Zahir Al-Din Muhammad Babur', *Muqarnas*, (1988), V, pp. 135-52.

bagh of Agra fort, built by Shah Jahan (1628-37 AD). Although the appearance of these two gardens is dissimilar yet the cultivation technique was essentially the same.[14]

Another point of discussion among the historians is to confirm the existence of well-planned gardens in South Asia before Babur. Evidence of the presence of well-planned symmetrical *chaharbagh* comes from a fifth century fortress walled city of Sigiriya in Sri Lanka where Senake Bhandaranayake, in his detailed study and archaeological survey, found a series of symmetrical water gardens, ascending terrace gardens, palace gardens on rock, and irregular boulder gardens.[15] It is believed that Sri Lankan learnt to build symmetrical *chaharbagh* gardens on account of their trade relations with the Sassanians Persia. Later on, in the early sixteenth century, the Deccan Kingdom also produced *chaharbagh* gardens as was in the case of the gardens of Ahmadnagar, Bidar and Golkunda. It seems probable that they were also inspired directly from Iran since Afaqi nobles under *Qutubshahis* (basically Central Asians), who were responsible for the building of gardens, were dominantly Iranians.[16] Even the Rajputs, apart from borrowing *chaharbagh* features in their gardens from Mughals, took inspirations for certain new features from outside the Mughal Empirealso. For instance, they built the hanging garden of *Maunbari* in the sixteenth century on mountain, in the vicinity of the palace of Amber in Rajasthan, almost similar to the Italian hanging gardens and other gardens of the Islamic World, like the garden of Qasr-i Qajar in Tehran.[17] Besides, the Rajputs kept some originality of their own in their gardens such as the stone-edged flower beds, conceived in a sinuous geometry of foliate and floral shapes, designed to create artificial floating feature on the surface of a formal pool of water in Jag Niwas garden at Udaipur, the most independent of the Rajput kingdoms.[18]

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[14] Fairchild D. Ruggles, *Islamic Gardens and Landscapes*, (Pennsylvania, 2008), p. 138.

[15] Senake Bhandaranayake, 'Sigiriya: Research and Management at a Fifth century Garden Complex', *Journal of Garden History*, (1997), vol. 17:1, pp.78-85

[16] For the details of the Deccani gardens, see G. Yazdani, *Bidar:Its History and Manuments*, (London, 1944); Ali Akbar Hussain, *Scent in The Islamic Garden*, (Pakistan, 2012); Daud Ali, *Gardens and Landscape Practices*.

[17] Jan Pieper, 'Hanging gardens in the Princely Capitals of Rajasthan and in Rennaisance Italy: Sacred Space, Earthly Paradise, Secular Rituals', in Monica Juneja, ed., *Architecture in Medieval India*, (New Delhi, 2008), pp. 549-58.

[18] Patrick Bowe, 'The Indian Gardening Tradition and the Sajjan Niwas Bagh, Udaipur', *Garden History*, (1999), Vol. 27, No. 2, pp. 189-205.

Above all, the characteristics of Mughal gardens have shown strong sense of design, impeccable with water as the connecting theme. Mughals started to build fourfold *chaharbagh*-symmetrical garden properly in India with the characteristic features of being rectangular or square, usually walled, with intersecting water channels which makes cross lined with walkways (*khiyabans),* a tank or tanks often one in the middle and well or wells on the corner of the gardens and outside the gardens. The squares were again sub-divided to create the same module on different scale depending on the area enclosed. Usually where the water channels intersect there could be either a water tank/pool or a fountain or a *chabutra.*

The Mughals started to build gardens along the way to claim their territories and to overcome the hot climate of the new land. Babur's tradition was almost discontinued during Humayun's reign due to chaotic political conditions. However, Akbar followed more or less the same line of his grandfather, especially in claiming the territoriality by building gardens on newly conquered territories. In fact, during his rule, a new era of building tomb in *chahrbagh* garden culminated in the Humayun's tomb garden in his reign, and finally Akbar himself was buried in a tomb garden at Sikandara. Jahangir who inherited the love of nature from his great grandfather became the great garden builder, especially after his marriage with Nurjahan and inclusion of her family in nobility who were migrated from Persia. The tradition of garden building reached its zenith in the reign of Shah Jahan when innumerable gardens were re-built and built. The best specimen of well-planned garden can be seen in Taj Mahal and Shalamar gardens. He literally transformed the garden design into the riverfront scheme in the garden of Taj and in the palace gardens of newly built Shahjahanabad, a scheme which was earlier adopted by Babur on the opposite side of the river Jamuna at Agra. Although Aurangzeb abandoned the tradition of building monumental gardens except a few, he put in efforts to maintain the existing gardens.

Besides the imperial gardens, built in the imperial cities such as in Agra, Delhi and Lahore, the garden building tradition, side by side, developed in the other *subas* of the Mughal Empire. With the weakening of the Mughal Empire, the tradition continued in the regional kingdoms of Rajastan, Punjab, Awadh and Deccan etc. In the eighteenth

century the twilight of the Mughal power, the peak of Rajput creativity in garden design started with heavily borrowed influence of the Mughal gardens' features in the gardens of Amber, Jaipur and Udaipur. Maharajas of Deeg (Bharatpur) and Rajas of Banaras also laid out gardens on the pattern of Mughals in the eighteenth century. The long tradition of Mughal gardening, jointly with Indian influence continued throughout the nineteenth century till it was further influenced by British gardening traditions which were again 'Anglo-Indian', and not purely 'English'.[19]

The known scholarship on Mughal gardens, in particular, and gardens in Mughal India, in general, has highlighted lacunae, raised new questions and extended new research approaches in the study of gardens. Mughal architecture has received much attention from the historians, but the garden as an integral part of the Mughal buildings was either neglected or found little space. Even the pioneering studies, that of Percy Brown and Fergusson treated gardens partly as a part of architecture and partly as a part of art history.

In 1904 AD, E.B. Havel opened up a new vista for research on Indian gardens by publishing a research paper entitled ***Indian Gardens,***[20] but he stressed more on aesthetic aspects. Villiers Stuart was the first who initiated proper work on Mughal gardens and published her book ***Gardens of the Great Mughals*** in 1913. The basic intention of this work was to create a model for the construction of the new British capital at Delhi. Though villiers Stuart, surveyed almost all the well-known Mughal gardens of Imperial cities but concentrated solely on the aesthetic aspects of the imperial Mughal gardens. Her last chapter dealt with the synthesis of Islamic and Hindu gardens purposely to extend the idea of a new landscape for the British. But, like many other European works in India, her work suffers with Euro-centric prejudices for Mughal gardens. Muhammad Shafi wrote an article entitled ***The Shalimar Garden of Lahore***[21] which was an attempt to highlight the importance of imperial garden in in the form of micro study. Then after decades, in 1972, a collective effort was done by Sylvia Crowe and her co-authors to

[19] For the development of English gardens in India, its plan, design and use, see Judith Robert, 'English Gardens in India', *Garden History,* vol. 26, No. 2 (Winter, 1998), pp. 115-135
[20] E. B. Havel, 'Indian Gardens', *House and Gardens,* (Nov., 1904), pp. 213-220, 268-74.
[21] Mohammad Shafi, 'The Shalimar Garden of Lahore', *Islamic Culture,* (1927), I, pp. 58-66.

reproduce a comprehensive book ***The Gardens of Mughal India.***[22] Introduction of the book itself reveals that they took inspiration from Villiers Stuart and even used some of the data collected by her. This created a shift from garden study to garden history in which a bibliography for the first time has been added. In totality, this work combined the approaches taken by Havel and Stuart and, thus, concentrated on the aesthetic aspects of the imperial gardens of Mughals. The work further suffered from shortcomings since it mentioned the Mughal sources but without proper references. However, it was indeed a new effort to explore the horticulture of the period albeit in a cursory manner to which their remarks in the work itself indicate that '…rewarding work awaits some scholar who would delve more deeply into the sources.'

Elizabeth Moynihan's book ***Paradise as a Garden in Persia and Mughal India*** has been considered an important contribution. In this work, she had utilized pre-Islamic literature to understand the evolution of the concept of garden as 'paradise' from Achaemenid and Sassanid periods of Persia and then she has tried to connect it with the materialistic evolution of gardens in Mughal Empire. The book further stressed on Muslim-Hindu synthesis like as was done in the works of Villiers Stuart and Sylvia Crowe et.al. She systematically surveyed and then excavated the *Bagh-i Nilofar* of Babur near Dholpur. During 1980s, numerous publications in the form of books and articles, based on historical and technical surveys have been published by several scholars; prominent among them were Subhash Parihar, Abdullah Chaghtai, Saifur Rehman Dar and Ahmad Nabi Khan etc. but all these works were mainly concerned with the aesthetic aspect and beauty of Mughal gardens. The known scholars like Ebba Koch, Wescoat and Abdur Rehman initiated an advanced scholarly trend in Garden history writing by publishing their research papers in various journals.

In 1996, Wescoat and Bulmahn, in their edited work ***Mughal Gardens, Sources, Places, Representations, and Prospects***, included papers presented in the symposium on 'Mughal gardens' organized by Arthur M. Sackler Gallery and Dumbarton Oaks, Washington. The work sheds light on the origins, development and types of Mughal gardens with futuristic remarks on garden research and conservation. The work further

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[22] Sylvia Crowe, Sheila Haywood et. al, *The Gardens of Mughal India*, (London, 1973).

disclosed the symbolic meaning of the garden in the poetry and literature, and their cultural values. Irfan Habib highlighted the economic aspect of Mughal gardens, for the first time, in his paper ***Notes on the Economic and Social Aspect of Mughal Gardens*** in the same work. Thus, the book started a new scholarly tradition in garden history of Mughals going well beyond the aesthetic aspects. Recently, a paradigm shift has been witnessed in the writing of garden history in ***Gardens and Landscape Practices in Pre-Colonial India: Histories from the Deccan'***, edited by Daud Ali and Emma J. Flatt. It is also a collection of essays presented at a workshop on *Fragrance, Symmetry and Light: The History of Gardens and Garden Culture in the Deccan* held at Central University of Hyderabad in 2007. The innovative aspects discussed in the works comprised the hydraulic technology, garden imaginary in paintings, poetry and other arts, charitable gardens, and the garden technology. The book not only deals with the symbolism of gardens in terms of beauty and the concept of Paradise, but also with the cultural experiences and practices in the gardens of Deccan. The study is concentrated on Deccan, and has discussed several new perspectives beyond the architectural design and water management which, as the introduction of the book suggests, opens and stimulates further research on the subject with different perspectives, especially on the Mughal gardens for which ample sources are available.

The above mentioned works, way or the other, dealt mainly with the imperial Mughal gardens built at Agra, Fatehpur Sikri, Delhi and Lahore, focusing chiefly on 'inspiration' and 'architectural features', thus leaving much space for further research on gardens. Keeping that in mind, an attempt has been made in the present thesis to explore the gardens in Mughal India, as a whole, concentrating on new and hitherto untouched aspects. Thus, the present study ventures beyond the study of physical features to the economic, cultural and political arena of the gardens. One of the objectives of this thesis is to connect the gardens with monuments and to highlight the hydraulic system, especially to trace the outside water sources of the Mughal gardens. Another important objective is to unravel the functional aspect of gardens in terms of socio-cultural and political uses of the gardens just to understand the paradisiacal and political semiology. An exclusive attempt has been made in this thesis to explore the economic and

horticultural study with special reference to garden workers and, above all, the garden management.

To explore the supra objectives, a wide range of sources have been used. Since for the Muslims an ideal garden appears to stem from the concept of Paradise, thus as religious literature, the verses of *Quran* have been used to understand the relations of the *Quranic* garden with the Mughal gardens. The *Quranic* verses have explained the plan of the Paradise garden with lawns interspersed with streams, trees with fruits and structures like pavilions and platforms etc.

The historical aspect of the study is based on the extent historical chronicles, biographies, memoires and poetries. The available historical accounts are, however, rich in some topic and meagre on others; for instance, much information is available on horticulture but almost no direct information is available on economy and administration of the gardens. *Baburnama* deals in length with the various aspects of the initial gardens, like layout and usage etc. Next to *Baburnama*, the pioneer work *Ain-i Akbari* adds the minute details of the administration, economy and culture of the Mughal Empire but has omitted the description of gardens, in details, except some passing references of the gardens in some selected *Subas* in the second volume. However, many chapters in the first volume seem relevant for the gardens, such as on buildings, encampments, and on fruits and flowers. Besides the gardens of imperial cities, the provincial gardens have been neglected. Abul Fazl does not record information regarding the gardens in the provinces of Bihar, Bengal, Orissa, Allahabad, Awadh, Malwa Berar, Ajmer, Delhi, Lahore and Multan. Not only *Ain* but *Khulasat-ut Tawarikh*, written on *subas* after a century later in around 1695 AD, is also silent on the provincial gardens except some passing references of the gardens of Shahjahanabad and the garden of Fidai Khan at Pinjaur. However, we find the reference of fruits and flowers, in this source, grown up in different neglected provinces of Mughal India at that time, such as in Bihar, Sylhet, and Kamrup. *Chaharchaman* of Chandra Bhan Munshi, also on *subas*, written around 1759 AD informs that 'in each of these regions and cities (all the provinces of Mughal India at that time), many splendid buildings (*imarat-i dilkusha)* and comforting gardens (*baghat-i*

rahat afza) have been constructed'.[23] The monumental regional work like *Mirat-i Ahmadi* by Ali Mohammad Khan on Gujarat (compiled in 1760) portrayed the provincial gardens as an imitation of the imperial gardens. The author included the list of gardens built at Ahmadabad in his *Khatima.* [24] *Tuzuk-i Jahangiri* of Emperor Jahangir provides much information about the ongoing activities in the gardens. Most importantly, the exhaustive description of nature in his autobiography reveals the horticulture of the Mughal gardens. Contemporary poetry discusses gardens sometimes metaphorically but sometimes as historical narration. The rotograph and transcript copies of some unpublished Persian sources, such as *Mirat-ul Haqaiq* and *Bayaz-i Khusbui*, have been consulted which unraveled certain new information. The former reveals some important information about the political uses of gardens while the latter provides new information and data about the rule of garden layout, expenditure, process of perfume making etc.

The European travelers' accounts give eyewitness accounts since they had been the visitors of the gardens. They have furnished the descriptive and informative details with special mention of their design and uses. The much analytical travellers' accounts, as 'outsiders', often corroborate and authenticate the Persian chroniclers who were 'insiders' and sometimes even portrayed a very different picture of the Indian gardens.

Although the thesis has no direct connection with architectural features, the survey and Archaeological Reports aided much in understanding the symbolic importance of the garden's buildings. My personal visits to the gardens of Agra, Fatehpur Sikri, Delhi, Kashmir and some of the eighteenth century gardens of Awadh revealed much to understand the gardens, in general, and their water works, in particular. The published Survey and Archaeological Reports added much information on garden design, especially the water management.

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[23] Chandra Bhan Brahman, *Chaharchaman*, ed. Syed Mohd Yunus Jafri, (New Delhi, 2007), p. 124.

[24] Ali Mohammad Khan, *Mirat-i-Ahmadi*, 2 vols. And supplement, edited by Nawab Ali (Baroda, 1927-30), (Suppl), pp.18-23; For the details of these gardens laid out by the nobility in Mughal Gujarat, see Sadaf Fatma, 'Gardens in Mughal Gujarat', in *PIHC*, (New Delhi, 2012), pp. 441-452; Idem, 'Constructional Activities of the Mughal Nobility in Gujarat', ed. N.R. Farooqi & S.Z.H. Jafri, *Understanding the Past:India in the Mirror of History*, (New Delhi, 2014), pp. 232-237.

Some Archival documents in the form of *farman, nishan, bainama, chaknama, shuqqa* and *yaddasht,* preserved in the National Archives of India, New Delhi and also in some published works, provided rare information related to the economy of the gardens.

The present study has, for the first time, included inscriptions to understand the perspectives of gardens in Mughal India which not only corroborate the accounts of literary texts but also add some more valuable information. It is worthnoting that inscriptions, as sources for the history of gardens, have not been used so far. In the absence of several gardens physically, these inscriptions supported much in identification of their locations. An intense search has been made to find and see the gardens from epigraphic lenses in various reports, Journals, Epigraphia Indica (Arabic and Persian Supplement), books and from personal survey of the gardens **(See Table)**. Almost all the inscriptions are in Persian language except one bi-lingual inscription of Ahmadnagar which is in Persian and Marathi language. These available inscriptions broadly form three categories: firstly, the inscriptions in which gardens are directly referred; secondly, the ones in which we find the incidental reference of the gardens; and thirdly in the form of some graffiti. Apart from the factual information of the name of the builders of gardens and the specific purpose, inscriptions glean the symbolic meaning of the gardens. Furthermore, they exhibit not only the aesthetical representations but valuable 'uses' and 'vide accessibility' of gardens.

Paintings, indeed, as a visual medium, extended much more information, sometimes rarest of the rare, to understand the features of the Mughal gardens. Mughal paintings have been used in the thesis as major source to reconstruct various aspects of the Mughal gardens with special reference to cultural activities and horticulture of the time. Although they were not the portrayal of actual gardens and were generally idealized scenes, even the idealized portrayal, unconsciously, depicts the 'norms' and 'uses' of gardens.

The structure and framework of this thesis is chronological and thematic. The present work represents three major themes: aesthetic, functional and symbolic. To elaborate these themes, the thesis has been divided into five chapters. The first and fifth

chapters are related to all the three themes—aesthetic, functional, and symbolic; second and third denote functional while fourth relates to symbolic as well as functional.

First chapter deals the aesthetic aspect of the gardens in Mughal India. The chapter analyses how gardens became an essential feature and inseparable part of almost each kind of buildings, be it palaces, forts, private residential buildings (*khanabagh*), *havelis*, sacred spaces like tombs and mosques, and public buildings like pleasure gardens. The chapter further elaborates the formal technical architectural classification of *chaharbaghs* and their hydraulic technology. In the second part of the chapter, an effort has been made to analyze the water management of Mughal gardens, in detail, especially by probing the outside source of water and inside distributions system.

Second chapter concentrates on the functional aspect of the gardens. The chapter discusses the role of gardens in growth of urbanization and the role of urbanization in the development of garden. Furthermore, it deals with the role of urban elite and merchants in garden buildings in different *subas* of Mughal Empire, which certainly played an important role in the urbanization and economy. It also aims to analyze the economy of the gardens with a special view to understand the level of expenditure on construction and maintenance of gardens. The chapter intends to answer important questions: whether the State met out the huge expenditure on gardens or was there any source of income from those gardens to meet the expenditure on their maintenance? Was there any commercial objective of those gardens? Besides, in the concluding portion of the chapter, an attempt is made to provide probable answers to some raised questions regarding the management, the administrators/officers and other staff etc., responsible for the upkeep and maintenance of gardens.

Third chapter again sheds light the functional aspects of the gardens. It discusses the multiple socio-cultural activities in the gardens ranging from the ceremonies like birth, wedding, festivals; composing, listening and reciting of poetry; love making, meeting and languishing of lovers to the playing and watching games and other kinds of entertainments. It demonstrates garden as a distinctive cultural zone which

represents social interaction and cultural manifestation. Concluding portion of the chapter argues about the private and public gardens which were open to public.

Chapter four basically deals with symbolic aspect but it also covers the functional aspect by discussing the political uses of the gardens in Mughal India. It starts with the paradisiacal symbol of Mughal gardens based on the information provided by inscriptions and Persian chronicles, corroborated by the *Quran,* and moves towards the domination and integration of political symbolism. As for the functional aspect, the chapter investigates the political role of gardens as a place of showing territoriality and well-ordered territory; as a place of coronation, enthronement, political victory and encampment; as a resort for the dignitaries and foreign envoys; and as a place of administrative activities: holding court, dispensing justice and punishments.

Finally, **chapter five** covers all the themes: aesthetic, functional and symbolic. The chapter deals with the horticulture in Mughal gardens. Basically, the fruits, flowers, herbs, and other decorative and shady trees represent the aesthetic beauty of the gardens which symbolizes the beauty of Paradise and sometimes the Worldly beauty also. It also probes into whether fruits and flowers were for the personal use of the royalty and common people or for commercial purposes. The chapter further highlights, with the help of paintings and literary sources, that how these fruits, flowers and trees in the gardens were arranged. An attempt has also been made to categorize the 'introduced' trees and plants in the Mughal gardens from Iran, Central Asia and New World as well as the 'indigenous' trees. The chapter further makes a study of certain innovations encircling fruits and flowers of Mughal gardens by 'grafting of fruits' as well as 'distillation of rose water and perfumes'.

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Sadaf Fatma

CONTENTS

ABBREVIATIONS

AHS	Aligarh Historian Society
Ain	*Ain-i Akbari*
AMU	Aligarh Muslim University, Aligarh (India)
ARASI	*Annual Reports on Indian Epigraphy*
ARIE	*Archaeological Report of Indian Epigraphy*
ASI	Archaeological Survey of India
Bib. Ind.	Bibliotheque India, (India)
BM	British Museum, (London)
BN	Bibliotheque Nationale (Paris)
CAS	Centre of Advanced Study, Department of History, AMU
EFI	*The English Factories in India*, ed., W. Foster
EI (A&P)	*Epigraphia Indica*, *Arabic and Persian* Supplement
IOL	India Office Library, (London)
Mirat	*Mirat-i Ahmadi*
Muntakhab	*Muntakhab-ut Tawarikh*
NAI	National Archives of India (New Delhi)
PIHC	*Proceedings of Indian History Congress*
Tuzuk	*Tuzuk-i Jahangiri*



GARDENS IN MUGHAL INDIA
Single Garden Δ
Numerous Gardens o
0 50 100 150 200 KM.
72°
80°
88°
28°
20°
12°
KABUL
Kabul
Kabul R.
KASHMIR
Srinagar
Bijbhera
Achibal
Hasan Abdal
Verinag
Indus R.
Rohtas
Sodhra
Sialkot
LAHORE
Jhelum R.
Chenab R.
Hazara
Kalanaur
Lahore
Amritsar
Ravi R.
QANDAHAR
Pinjaur
Sirhind
Patiala
Sutlej R.
Kairana
(Saharanpur)
TIBET
DELHI
Yamuna R.
Ganga R.
Indus R.
MULTAN
Delhi
Sambhal
Gandak R.
AJMER
Brindaban
Mandakar
Kol
AWADH
Farrukhabad
Deeg (Bharatpur)
Sikandara
Sandila
Bayana
AGRA
Faizabad
Gorakhpur
Amber
Jaipur
Fatehpur Sikri
Ekdilabad
Lucknow
Brahmaputra R.
Dholpur
(Etawah)
Sarju R.
Ajmer
Gwalior
Hajipur
Luni R.
Chambal R.
Ganga R.
AGRA
Allahabad
Banaras
Patna
Maner
Munger
SIND
ALLAHABAD
BIHAR
Thatta
Udaipur
Son R.
Murshidabad
Sonargaon
Sherpur
Sironj
Dhaka
BENGAL
Ujjain
Ahmadabad
MALWA
Mahmudabad
Narbada R.
Cambay
Mandu
ORISSA
GUJARAT
Junagarh
Ellichpur
Tapti R.
Surat
Burhanpur
KHANDESH
Mahanadi R.
Una
(Diu)
BERAR
Aurangabad
Shahpur
(Thana)
Ahmadnagar
AHMADNAGAR
Godavari R.
BAY OF BENGAL
Bidar
Golkunda
ARABIAN SEA
Bijapur
GOLKONDA
BIJAPUR
Krishna R.
Masulipatam
Tungabhadra R.
Goa
Cauvery R.
Calicut
Faiz Habib

Chapter: I

Mughal Gardens, Monuments and Hydraulic System

The initiator of the Mughal gardens in India was Zaheeruddin Babur who had witnessed the beauty of Timurid gardens in Central Asia during his early days.[1] Furthermore, he was much influenced by the picturesque description of gardens in Persian poetry of Firdausi, Sa'adi, Hafiz, Khayyam and Nizami.[2] In India, Babur laid out the gardens more systematically. Fundamentally, the Mughal gardens have had edifices in a symmetrical arrangement within enclosed towns with provisions for water channels, cascades, water tanks and fountains etc. Thus, the Mughals maintained the tradition of building fourfold (*chaharbagh*)-symmetrical garden. Babur, however, applied the term *chaharbagh* in its widest sense which includes terraced gardens on mountain slopes and his extravagant rock cut garden, the *Bagh-i Nilufar* at Dholpur.[3] After Babur, the tradition of building *chaharbagh* touched its zenith during the time of Shah Jahan. Unlike Timurid gardens, the *chaharbagh* element was not always followed with rigid cross intersected by the pathways but was made in less sharply built plots and beds in the area between the axial channel and surrounding walls.[4] However, modern scholars are now increasingly questioning the excessive use of the term *chaharbagh* in the interpretation of Mughal gardens, since it was not always symmetrical. This view finds archaeological support also. The excavated Mughal garden at Wah (12 kms west of Taxila), near Hasan Abdal, associated with Mughal emperors Akbar, Jahangir and Shahjahah reveals that the pattern and overall design has not been symmetrical on the first and second terraces.[5] A miniature painting made by Farrukh Chela, on the margin of *Diwan-i Hafiz,* depicts the irregular arrangement of a walled garden (**Plate: I).** However, the excavated Wah garden displayed other features of the structure, such as the platforms, water channels and terracotta pipes to supply water, *baradari*, decorations of cascades and channels in a

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[1] For Persian and Central Asian garden tradition and their influence on Mughal gardens, see Mehdi, M. R. Moghtadar et.al., *The Persian Garden- Echoes of Paradise,* (Washington, 2004); E. B. MacDougall and Richard Ettinghausen (eds.), *The Islamic Garden: Dumbarton Oaks Colloquium on the History of Landscape Architecture,* (Washington, 1976), IV; Moynihan, *Paradise as a Garden*; Sylvia Crowe, et.al., *The Gardens of Mughal India*.

[2] R. Nath, 'Bagh-i Gul Afshan of Babur at Agra', in *Indo Iranica,* (1970), 23 (iii), pp. 20-21.

[3] Ebba Koch, 'My Garden is Hindustan, The Mughal Padshah's Realization of a Political Metaphor', in Michel Conan, ed., *Middle East Garden Traditions: Unity and Diversity: Questions, Methods and Resources in a Multicultural Perspective,* (Washington, 2007), p. 159.

[4] Ebba Koch, 'The Mughal Waterfront gardens', in Attilio Petruccioli, ed., *Gardens in the Time of the Great Muslim Empires: Theory and Design,* in *Muqarnas* Supplements, (Leiden, 1997), vol. 7, p. 142.

[5] Makin Khan,'An Introduction to the Historical, Architectural and Hydraulic Studies of the Mughal Garden at Wah, Pakistan', *East and West,* (December, 1996), Vol. 46, No. 3/4, p. 463.

chevron pattern, flower vases, floral motifs, creeper designs and geometrical patterns which represent some of the element depicted in Mughal Architecture.[6] The distinctive architectural feature of *baradari* in the Wah garden is flat and domed roofs were noticed on the alternative bays.[7] The Shalamar gardens of Kashmir and Lahore display some buildings, especially edifices made for ladies (*zanana)* on the highest terraces.[8] However, it is rightly observed that all gardens of Mughal India were not fulfilling the characteristic features of Mughal gardens. Besides, there were ordinary groves and orchards or flower and fruit gardens also.[9]

As for location, the Mughal emperors were much particular in selecting places of great natural beauty. Often they selected mountain slopes with gushing water to layout gardens, the finest example being *Bagh-i Shalamar* and *Bagh-i Nishat* in Kashmir, Shalamar garden at Lahore and Mughal garden at Wah (Hasan Abdal) etc.

Mughal gardens and monuments

Almost all the Mughal gardens contained some very important buildings like residential palaces, forts, mausoleums, mosques etc. The gardens became an essential feature of almost each kind of Mughal monuments and were inter related to these monuments which can be categorized as: (i) Gardens attached with Imperial palaces, forts and gardens which beautified private residential buildings of the nobles (ii) Religious and sacred structures i.e., tombs and mosques erected in the gardens, and (iii) Resort and public building in the pleasure gardens. The Imperial palaces of Mughals at Agra, Delhi and Lahore were built around the 'gardens'.[10] The first Mughal emperor Babur made his gardens outside the fortress palaces of pre-Mughal rulers just as a symbol of appropriation of land because they had been the seat of power, as agreed by both

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[6] Ibid.
[7] Ibid.
[8] Sylvia Crowe, et.al., pp. 102, 150; Moynihan, *Paradise as a Garden,* p. 142.
[9] Irfan Habib,'Notes on the Economic and Social Aspect of Mughal Gardens', in James L. Wescoat, *Mughal Gardens: Sources places,* p. 127.
[10] Klaus Rotzer and Khandu Deokar 'Mughal Gardens in Benaras and its Neighbourhood in the Eighteenth and Nineteenth Century', in Francoise Nalini Delvoy, ed., *Confluence of Culture: French Contribution to Indo Persian Studies,* (New Delhi, 1995), p. 135.

Catherine and Wescoat. [11] But later palaces were built in the garden as a metaphor of Paradise on earth, the example of which may be found in the fusion of palace and gardens in Shah Jahan's fortress palace at Delhi.[12] The court poet and historian Salih Kambuh in his verses proclaims Shah Jahan's palace as terrestrial image of paradise with its *Hayat Bakhsh* (life bestower) garden like a new *Iram*[13](the fabulous garden) with its natural plants and beautiful water decorations.[14] Basically, the Persians in Iran and Central Asia, and the Mughals in India borrowed the concept of building monuments in the gardens from the *Quran*. The *Quranic* verses variously mention the presence of beautiful mansions (*masakin*) in the Gardens of Eternity (*Jannat-i Adnin*).[15]

Besides religiosity, observes Ebba Koch, these paradisiacal palace gardens has also some political meaning since 'they were intended as an image of his reign and empire as garden, paradise of the ideal king whose good government had brought about a new golden age of an unending spring.'[16] Not only Red Fort palace, but all other Mughal palaces situated at Agra, Lahore, Delhi and Kashmir etc. were intersected with beautiful gardens.[17] Manucci gives the vivid picture of the Mughal Empire that all the three principal imperial seats, Delhi, Agra and Lahore, had been beautified by the gardens with running water.[18] However, evidence suggests that not only the above mentioned palaces, but almost every Mughal palace was adorned with gardens. The garden of Rafiz Rakhna at Sirhind, known as Aam Khas Bagh, displays the meaning of its nomenclature, since this walled garden had a palace and a *sarai*.[19] Sultan Hafiz Rakhna of Herat, the *shiqdar* (superintendent) at Sirhind, laid out this garden during the reign of Akbar with some

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[11] Catherine B. Asher, 'Babur and the Timurid *Char Bagh*: Use and Meaning', in *Environmental Design,* (1991), no.1-2, pp. 37, 47; James Wescoat, 'Picturing an Early Mughal Garden', *Asian Ar*t, 2 (1989), pp. 75, 77. Babur's first garden at Agra was named *Hasht Bahisht Bagh.*

[12] Ebba Koch, 'Mughal Palace Garden from Babur to Shahjahan (1526-1648)', in *Muqarnas,* (1997), vol. 14, p. 143.

[13] The fabulous garden *iram* (Arabic), is said to have been devised by Shaddad bin 'Ad in emulation of the gardens of paradise. Cf. F. Steingass, *Comprehensive Persian English Dictionary,* (N. Delhi, 2007), p. 39.

[14] Salih Kambuh, *Amal-i- Salih,* (Calcutta, 1912-46), III, pp. 28-29.

[15] *Quran,* 9:72; 39:20; 61:12.

[16] Ebba Koch, 'Mughal Palace Garden from Babur', op. cit., p. 159.

[17] For detailed description of Anguri Bagh in Agra fort palace, Hayat Bakhsh and Red Fort Palace, Lahore Fort and gardens etc. see Ibid., pp. 143-165.

[18] Manucci, Nicolao, *Mogul India (1653-1708) or Storia do Mogor*, Eng. tr. W. Irvine, 4 vols. (Calcutta, 1965-67), II, p. 463.

[19] Subhash Parihar, *Mughal Monuments in the Punjab and Haryana,* (New Delhi, 1985), p. 10.

buildings within the premises which had, in words of Badauni, no parallel in Hind.[20] Shah Jahan took keen interest in the development of gardens and made six visits to Sirhind garden. Abdul Hamid Lahori informs us that Shah Jahan celebrated the *nauroz* festival in the garden in 1634 AD and ordered Dayanat Khan, the *diwan* of *Sarkar* Sirhind, to build few more buildings of the palace including *daulat khana-i khas* (personal palace), *jharokha mubarak* (lattice window), *khabgah* (sleeping apartment), and a *mahal-i muqaddas* (exalted palace) near the tank.[21] However, Lahori was contradicted by the European traveler William Finch who mentions the presence of *daulat khana-i khas* in 1611 AD. According to him the palace structure of the garden had an eight square *mahal* with eight chambers for women. There was a tank in the middle over which there were eight rooms with galleries round about.[22] Finch places the palace in the crossing of two causeways whereas another traveler Manrique (visited India in 1641 AD) locates it in the last section and describes it as a 'grand royal palace'.[23] Most probably it was built by Sultan Hafiz Rakhna himself, as the plan of the garden shows the period of the reign of Akbar.[24] A picturesque description of the palace situated in the so called *Zahra Bagh*, erroneously called after the name of Zahra, the daughter of Babur,[25] has been given by Shah Jahan's poet laureate Abu Talib Kalim who named the garden as *Bagh-i Jahanara*, in which a palace (*qasr*) was surrounded by flowerbeds with a tank and situated on the bank of the river.[26]

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[20] Abdul Qadir Badauni, *Muntakhab-ut Tawarikh*, Eng. tr., George Ranking, Reprint. (New Delhi, 1990), II, pp. 393-94.

[21] Abdul Hamid Lahori, *Padshahnama*, ed.,Kabir Al-Din Ahmad, Abd Al-Rahman and W.N. Lees, (Calcutta, 1866-72), II (i), pp. 115-16.

[22] W. Finch, *Early Travels in India*, ed., W. Foster, reprint, (New Delhi, 1968), p. 158.

[23] Manrique, *Travels of F.S. Manrique, 1629-1643*, Eng. tr., Luard and Hosten, (Oxford, 1927), II, p. 184.

[24] Subhash Parihar, *History and Architecture Remains of Sirhind: The Greatest Mughal City on Delhi Lahore Highway,* (N. Delhi, 2006), p. 190.

[25] It was widely believed that Zahra Bagh received its name from Babur's daughter Zahra or Zehra but Ebba Koch, on the basis of sources and features of the surviving architectural remains, came to the conclusion that this garden was commissioned by Nur Jahan, the wife of Jahangir and was completed in 1621 AD. Cf. Ebba Koch, 'the Zahara Bagh: (*Bagh-i-Jahanara*) at Agra', *Environmental Design*, (1986), I, pp. 30-37.

[26] Abu Talib Kalim, *Diwan*, as cited by Ebba Koch,' The Zahara Bagh', op. cit., p. 34. The verses of Talibas follows:

> 'A boat trip will remove the sorrow from your heart,
> Pass by the garden of Jahanara!
> In this paradise is such a heart attracting palace (*qasr*)
> That the eyes get anxious to behold it.

Mughal garden means the aesthetic water features and plantation with rich 'architectural structures'. However, Rotzer says that Mughal garden was entirely a 'habitable' space comparable to the English Bungalow.[27] Imitating the Mughal life style, the Jat rajas of Deeg and maharajas of Banaras, constructed the residential palaces in the gardens with Mughal architectural features. The buildings were at the southernmost part of the gardens on a raised platform, facing towards North to avoid the sun rays and, at the same time, to have the panoramic view of the gardens.[28] An early eighteenth century painting explicitly shows the relationship and interlocking function of the palace and garden **(Plate: II**). Conclusively, during the time of Mughals, even if each garden had not a palace yet almost each palace had a garden. This was not the case with the Imperial palaces only; the palaces of the nobles were also interlocked by the gardens.

The gardens attached to the private residence of a noble were known either as the *khanabagh*[29] or *sarai bustan.*[30] The Mughal nobles followed the Timurid tradition of Central Asia in making their residences within gardens. Clavijo, a Spanish ambassador to Timur's court (1404 AD), gives an eye-witness account that at Samarqand, the capital, Timur had built sacred places in the gardens. [31] Likewise, in India, several *khanabagh*s (residences of the nobles), dated from the time of Akbar, have been excavated at Fatehpur Sikri. In construction, they were quite small as compared to the *khanabagh* or *pa-in bagh* (garden outside the main structure but in its shadow) of Shah Jahan's *daulatkhana.* The residential place of Abdur Rahim Khan-i Khanan, the Iranian nobles' house, the *yatishkhana* of the animal superintendent, the *yatishkhana* of the superintendent of Hathipol Sarai, the *fardkhana* (guest house) near *diwan-i Am*, and the main *daulatkhana*

On three (of its) sides are flower gardens and in front of it is the river,
And each of its waves a curling lock brings about joy.
Its (the palace) doors and walls through paintings (have become) flowerbeds,
And one should sit inside facing the wall!
In that (palace) is a tank, full of the water of life,
And its waves do not know its shore.
The flower garden and this sublime palace were founded.'

[27] Rotzer and Deokar, 'Mughal Gardens', op.cit., p. 138.
[28] Ibid., pp. 137,138, 140, 143.
[29] Lahori, *Padshahnama*, I, (i), p. 243.
[30] Salih Kambuh, *Amal-i Salih*, III, p. 46.
[31] Clavijo, Ruy Gonzalez, E*mbassy to Tamerlane 1403-1406*, Eng. tr., Guy le Strange, (London,1928), p. 144.

of Shah Jahan contained house gardens, situated inside the palace in small *chaharbagh* style.[32] In Delhi, the residences of the nobles were surrounded by gardens and were mostly situated outside the wall in the suburb where water was available in plenty for larger gardens. The evidence of *Khulasat-ut Tawarikh* suggests that in every house there were fresh gardens provided with tanks and reservoirs.[33] Salih Kambuh, in his picturesque language, describes the beauty of these gardens and narrates that even the buildings and gardens of Baghdad, in front of Dajla River, felt ashamed before these gardens (*bagh)* and orchards (*bustan).*[34] A modern scholar Stephen P. Blake in his survey to Shajahanabad (Delhi) came to the conclusion that in the city, every elite mansion had its *Khana Bagh* (House Gardens).[35] These gardens were extremely pleasant places to stay during the hot weather especially for the Begums who being forbidden to go into public spaces, used to amuse themselves in the secluded portions where they feel like 'paradise'.[36] Bernier found gardens in every good house and said 'they consider that a house to be greatly admired ought to be situated in the middle of a large flower garden…'[37] Chandra Bhan Brahman, a native of Lahore, and *munshi* under Shah Jahan, while describing the beauty of the fort of Shahjahanabad and its gardens, writes that there were so many enchanting (*dilkash*) and eternal gardens which reminds one of Paradise (*bahisht*).[38] Chandra Bhan, in his *Chaharchaman,* eulogizes *khanabagh* and the gardens in these words:[39]

> 'Every house (*makan*) is like a sublime heaven (*firdaus-i barin*),
> And every building has a paradisiacal garden (*bustan*);
> Its avenues (*khiyaban)* are so utterly delightful (*ishrat sirisht*),
> You might say they are the lanes of the road to Paradise (*rah-i bahisht*)'.

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[32] Syed Ali Nadeem Rizavi, 'Exploring the Mughal Gardens at Fatehpur Sikri', *PIHC,* (New Delhi, 1998), p. 900.
[33] Jadunath Sarkar, *The India of Aurangzeb (Topography, Statistics and Roads) Compared with India of Akbar, with Extracts from the Khulasat-ut-Tawarikh and Chahar Gulshan,* (Calcutta, 1901), p. 4.
[34] Salih Kambuh, *Amal-i Salih,* III, p. 46.
[35] Stephen P. Blake, *Shajahanabad the Sovereign city of Mughal India: 1639-1739,* (Cambridge, 1991), p. 49.
[36] Rotzer and Deokar, 'Mughal Gardens', op.cit., pp.138; For details of the *khanabagh* of Delhi see Stephen Blake, *Shahjahanabad,* pp. 62-64. Idem, 'The *Khana Bagh* in Mughal India: House Gardens in the Palaces and Mansions of the Great Men of Shahjahanabad', in James L. Wescoat, *Mughal Gardens: Sources places,* pp. 171-88.
[37] Francoise Bernier, *Travels in the Mughal Empire, 1656-1668,* Eng. tr., Archibold Constable, Reprint, (New Delhi, 1983), p. 247.
[38] Chandra Bhan, *Chaharchaman,* p. 124.
[39] Ibid., p. 125.

In fact, in almost every Mughal town there were suburbs comprising of Mughal gardens. In Rajasthan, these types of gardens were known as *haveli* gardens.[40] Both banks of Jamuna river in Agra, especially the right bank had dotted by the *havelis* and gardens of nobles and dignitaries.[41]

Besides the Imperial and nobles' residential gardens, which were centered with palaces, mansions and *havelis*, there were funerary gardens too. It became almost customary that after the death of the owners, their pleasure gardens were generally converted into funerary gardens by constructing sepulcher at the center where once the *baradari* or open pavilion stood.[42] The sixteenth century traveler Edward Terry informs us that every affluent Muslim used to build his sepulcher in his life time, maintaining all the features of Mughal gardens.[43] The building was generally situated on square platform with four canals ornamented with fountain and trees like cypresses and fruit to make the funerary gardens beautiful and evergreen.[44] Generally the funeral gardens of the Emperors or nobles had been handed over to the priests and *faqirs* who used to live and look after the garden by receiving their subsistence from the sale of the fruits and from the alms given by the visitors who came to visit the resting place of their relative or friend or master.[45] A mosque attached to it was an essential architectural feature of the funerary gardens. In the light of the Islamic notion of a garden in the Paradise, James Dickie tried to explain that 'burial in a garden amounts to a material anticipation of immaterial bliss and the garden approximate the *Quranic* model the more effective is the analogy'.[46]

However, the funerary garden was the answer of Islam to the grim realities of death and to prepare the owner for death even in his lifetime, and also with the intention of receiving prayer (*fatiha*) by the descendants after the death. The tomb of Humayun

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[40] Ajay Khare, 'Ghat ki Guni: The Gateway to Dhoondhar Empire', in Shikha Jain, ed., *Princely Terrain: Ambar, Jaipur and Shekhawati*, (Delhi, 2005), pp. 18-29.
[41] Ebba Koch, *The Complete Taj Mahal and the Riverfront gardens of Agra,* (New Delhi, 2006-7), pp. 30-31, 37-79.
[42] Nadeem Rizavi, 'Exploring the Mughal', op.cit., p. 859.
[43] Terry, *Early Travels,* pp. 315-16.
[44] James Forgusson, *History of Oriental Architecture,* (London, 1910), II, pp. 289-90.
[45] Terry, *Early Travels*, pp.315-16; James Dickie,'The Mughal Garden: Gateway to paradise', *Muqarnas*, (1985), vol. III, p. 132.
[46] Ibid., p. 131.

became the favorite destination of his descendants. Whenever they used to visit Delhi, it was obligatory for them to make prayers.[47] Irfan Habib further generalized Richard's view of Imperial to ordinary people, and elaborates that these tomb gardens were generally accessible to the common people so that they could come to visit the gardens and pray for the salvation of the entombed.[48] An inscription of Gulabi Bagh at Lahore makes it clear that Sultan Beg constructed a garden like that of paradise so that 'the pious prayed to God for his eternal life!'[49]

It is generally believed that the tradition of constructing tomb in the enclosed gardens began in India during the time of Khaljis when the complex of Mandu was built in which there stands a tomb of Hoshung Shah with a congregational mosque (Friday masjid) and a *madrasa*.[50] Although it is not certain that whether the tomb garden was in vogue during the time of Timur or not, since the Timurid tombs are located in the cemeteries,[51] yet according to Babur's own testimony, he buried his mother in the garden in Kabul (1506 AD).[52] Consequently, these types of gardens proliferated in almost in every city; especially in Agra, Delhi and Lahore which was imitated exhaustively by the Mughal officials in all the *Subas* of the empire. Thus, Humayun's tomb at Delhi, Akbar's tomb at Sikandara (Agra), Itmad-ad Daula's tomb at Agra and finally Taj Mahal (Agra) exhibit the best and fabulous specimens of imperial and noble's tomb gardens. The author of *Khulasat-ut Tawarikh* comments upon the tomb gardens of Delhi that the tombs of the nobles, ministers, scholars and other accomplished persons, amid gardens and orchards, were too many to be enumerated.[53]

The evidence frequently refers the *zanana* tomb gardens for the royal women, such as Shah Begum's tomb, Jahangir's first wife and Man Singh's sister, known as

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[47] J. F. Richards, 'The Historiography of Mughal Gardens', in Wescoat, ed., *Sources, Palaces*, pp. 263-64.
[48] Irfan Habib, 'Notes on the Economic', op.cit., p. 137.
[49] Syed Muhammad Latif, *Lahore: Its History Architectural Remains and Antiquities*, (Lahore, 1892), p. 134.
[50] Fairchild Ruggles, *Islamic Gardens*, p. 108.
[51] Catherine, 'Babur and the Timurid *Char Bagh'*, op. cit., pp. 49-50.
[52] Zahiruddin Muhammad Babur, *Baburnama*, Eng. tr., A. S. Beveridge, Reprint, (New Delhi, 1979), p. 246.
[53] Sujan Rai Bhandari, *Khulasat-ut Tawarikh*, op.cit., p. 11.

Khusrau Bagh;[54] garden of Raushanara, half a mile from Delhi;[55] Rabia Durrani's tomb, situated in the middle of a *chaharbagh* garden, a typical of most imperial Mughal tomb at Aurangabad;[56] Qudsia Bagh on the north of the walled city of Delhi which forms a turning point in the history of the late Mughal architecture.[57] Tomb of Bahu Begum, wife of Shujauddaula, at Faizabad was also inspired by the Mughals and was built on *chaharbagh* pattern in 1806 AD.[58] Bibi Pari's tomb was built in the complex of Lalbagh at Dhaka, on the same pattern of *Aam Khas Bagh* (strictly with Mughal features) at Sirhind, albeit not terraced.[59] However commenting upon the tomb gardens, the European travelers aptly described that the gardens served their owners as place of enjoyment in their life and continued to serve even after death as the choicest place for their tombs and mausoleums.'[60] Recently modern scholars have extended another plausible reason for such a vide availability of tomb gardens in economic perspective since the tomb gardens were exempted from the garden tax (*sar-i darakhti).*[61]

Besides the tomb gardens of rulers, nobles and royal ladies, there were tomb gardens of holy men also, as the Sufis loved nature and usually lived outside the quarters of the city. The grave of the famous saint of Gujarat, Shah Alam was outside the city of

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[54] Catherine, *Artchitecture of Mughal India, The New Cambridge History of India,* (Cambridge, 1992), 1:4, pp.104-05, 146. When Shah Begum, Jahangir's first wife and Man Singh's sister, poisoned herself in 1604 AD, she was buried in a garden at Allahabad, which came to be called Khusrau Bagh after Khusrau was buried there in 1622 AD and even today is known with the same name. In 1611 AD Finch found it as a sumptuous tomb.

[55] This garden was built by princess Raushanara, daughter of Emperor Shah Jahan in 1650. She is buried in the middle of an open pavilion which was in the center of the garden. Fanshawe, *Delhi Past and Present,* (London, 1902), p. 61.

[56] Catherine, *Artchitecture of Mughal,* pp. 264-65.

[57] Ibid., pp. 302-03; Fanshawe, p. 54. The tomb of Udham Bai (known as Qudsia Begum, wife of Muhammad Shah) was built in a *chaharbagh* palace complex in 1748 AD and a mosque is also attached to it. She was a dancing girl who was later given the title 'Nawab Qudsia Sahib-uz Zamani' by her son Ahmad Shah. Cf. Herman Goetz, 'The Qudsia Bagh at Delhi: Key to Late Mughal Architecture', in Monica Juneja (ed.), *Architecture in Medieval India:Forms, Context, Histories,* (New Delhi, 2008), pp. 220-31; R Nath, *Monuments of Delhi: Historical Study,* (New Delhi, 1979), p. 69.

[58] Catherine, *Artchitecture of Mughal,* p. 319. I visited the said tomb and found it a replica of Humayun's tomb with underground grave and stairs on all the four sides to go to the elevated tomb**.**

[59] Bibi Pari was the favourite daughter of Shaista Khan, governor of Bengal, during the reign of Shah Jahan. Her tomb was built in Lal Bagh Fort at Dhaka which became the premier city after shifting the capital here during the time of Shah Jahan. Though it is known as Lal Bagh Fort, it more closely resembles an elaborate walled garden which adheres to the imperial Mughal idiom. Cf. Catherine, *Artchitecture of Mughal,* pp. 284-85.

[60] Pelsaert, *Jahangirs India of Francisco Pelsaert*, Eng. tr., W. H. Moreland & P. Geyl, (Delhi, 1925), p. 5; Terry, *Early Travels,* p. 315-16.

[61] *Mirat,* I, pp. 263-64; Irfan Habib, 'Notes on Economic', op.cit, p. 135 n.

Ahmadabad in a verdant garden which was plundered at the time of the invasion of the Marathas.[62] References reveal that the rulers often used to grant lands to saints who, later on, were buried in those lands, which were often encircled by gardens.[63] Besides lands, evidences suggest that the emperors used to donate gardens also to the tombs of Sufi saints.[64] Havel writes that Mughals had the custom of building tombs for themselves and for their saints or heroes, which also finds support from Terry's descriptions that many tombs in the gardens were built in the memory of esteemed saints.[65] It is found that they loved to be in the company of saints and to take blessings from them. Dara Shikoh had spiritual relationship with several Sufis, especially with Mian Mir of Lahore. His work *Sakinat-ul Aulia* refers to his several meetings with Mian Mir in the garden.[66] The Mughal painter Bichitr has portrayed perhaps the same prince along with sages and learned men in the garden **(Plate: III)**. Like Sufis, Hindu Yogis also had their attachment with gardens. *Archaeological Survey of India* Report makes it clear that to the West of Shahganj at Agra, there was a walled garden enclosure, known as Udinath Bagh, named after a Jogi or Hindu devotee who lived there during the time of Akbar. The survey report further showed that the garden had octagonal towers on each of the four corners with, on the east end of the enclosure, a fine old red sand stone building and many full bellied pillars which were decidedly Hindu in character. [67]

The Mughal gardens were not only intermingled with the sacred structure like tomb but they were dotted with mosques also. Mosques in the gardens symbolize spirituality. One of the earliest depictions of such types came from the great Umayyad mosques in Damascus which possessed a splendid mosaic garden.[68] In India, Babur for the first time built a mosque in a large *chaharbagh,* Bagh-i-Nilofar at Panipat, on the

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[62] *Mirat,* Eng. tr., M. F. Lokhandwala, (Baroda, 1965), pp. 506-07.
[63] Abdul Rehman, 'Garden Types in Mughal Lahore According to Early Seventeenth Century Written and Visual Sources', in Petruccioli, ed., *Gardens in the Great Muslim Empires,* p. 163.
[64] Khwaja Mohd Azam Kashmiri, *Waqiat-i Kashmir,* Urdu tr., Dr. Shamsuddin, (Srinagar, 2001), p. 229; Itmad Ali Khan *Mirat-ul Haqaiq*, Fraser Collection,124, Bodleian Library, transcript of the manuscript (T. No. 92), written in the early eighteenth century, is preserved at the CAS, Department of History, AMU, Aligarh, f. 191b.
[65] E. B. Havel, *Indian Architecture: Its Psychology Structure and History,* (London, 1913), p. 62; Terry, *Early Travels,* p. 316.
[66] Dara Shikoh, *Sakinat-ul Aulia,* (Tehran, 1965), pp. 22-24.
[67] *Archaeological Survey of India (ASI), 1871-72, (*Varanasi, 1960*),* IV, p. 203.
[68] Osamah El Gohary, 'Symbolic Meaning of Gardens in Mosque Architecture', in *Environmental Design, (*1986), p. 32; Godfrey Goodwin, 'Gardens of the Dead in Ottomans Times', *Muqarnas,* (1988), V, p. 62.

pattern of the congregational mosque used by the Timurids.[69] Thus, like *chaharbagh* concept, Babur introduced the concept of building mosque in the garden. This legacy was carried on by the later Mughals too. The Badshahi mosque of Aurangzeb at Lahore with a garden courtyard without tomb is a live example. Likewise the region of Golkunda, in the sixteenth and seventeenth century, provides ample examples of mosque gardens.[70] Thus, a mosque attached with tomb in a garden became more prevalent. The regional kingdoms also followed the Mughal way and built mosques in the splendid gardens, often attached to mausoleums.[71] In the beautiful *chaharbagh* gardens of Mian Mir Nawab, son of Nawab Sadullah Khan, who was the Prime Minister of Jahangir at Lahore, there were two mosques, opposite to each other, most probably one for the ladies in the East and another for the nobles in the West.[72] Epigraphs of the period also authenticate the building activity of the gardens, sometimes attached to mosque and sometimes even far from mosque, given in *waqf* to the mosque.[73] Like mosques, temples were also built amid gardens on the pattern of Mughals by the regional rulers. Most of the temples of newly built Jaipur city by Sawai Raja Jai Singh had gardens.[74]

The pleasure gardens and their monuments were the most important feature of Mughal gardens. Inspired by nature, it was first developed by Babur in Farghana Valley on the line of the Iranian tradition. These gardens were actually meant for the sloping sites to create terraced gardens with flowing water but Mughals started to build these types of gardens even in the plains of Agra by developing the suitable hydraulic system. The courtiers and other elites followed the same traditions and the city like Lahore ultimately became the 'city of gardens'.[75] There were innumerable pleasure gardens at the time of Mughals. After the annexation of Kashmir, it became a hub for such type of

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[69] Catherine, 'Babur and the Timurid *Char Bagh'*, op.cit., p. 51; Idem, *Architecture of Mughal*, pp. 24-25, 27-28. The literary sources have not mentioned this mosque since Babur's memoir has lacunae of this period and Zain Khan's work ends with the early events of 1527 AD. However, an inscription, found in the mosque mentions that the mosque was under construction in 1527 AD and its gate, well and garden were finished by 1528 AD. (Ibid., p. 25).
[70] Ali Akbar Hussain, *Scent in The Islamic Garden*, p. 32.
[71] Havel, *Indian Architecture*, pp. 189-90.
[72] Latif, *Lahore*, p. 148.
[73] *Epigraphia Indica* (Arabic and Persian Supplement), *1933-34*, p. 11; *1939-40*, p. 30; *1955-56*, pp. 83-84; Muhammad Qāsim Hindū Shāh Firishta, *Tarikh-i Firishta*, (Lucknow, 1874), II, p. 143.
[74] Ajay Khare, 'Ghat ki Guni: The Gateway', op.cit., pp. 28-29.
[75] Abdul Rehman, 'Garden Types in Mughal Lahore', op.cit., p. 164.

gardens and the tradition of this type of garden design reached its zenith with the construction of the Shalamar Garden at Lahore. Finally the Mughal pleasure gardens became an extension of the Royal Palace. A large number of buildings were built, for instance, in the Shalamar garden of Kashmir and Lahore which include *diwan-i- aam, -diwan-i-khas, baradari, hammam, zanana* and many more.[76] Generally, the lower terrace was reserved for the use of general public; upper for royalty and nobility; and the uppermost for *hammam* and *zanana.* Important administrative, socio-cultural, political and military activities were performed there. Thus, the pleasure gardens served heterogeneous purposes.

Waterworks in Mughal Gardens

Like Persian and Central Asian gardens, water became the central and connecting theme of the Mughal gardens. Earlier, Hindus were also interested in water and water sites but with the religious significance only. Water played an effective role in the Mughal gardens right from the time of Babur. He was more interested in 'beauty' than 'ecclesiastical prescription'. However, in India, the Mughals also assimilated certain typical Indian features in their water works of the gardens on the line of the Hindu romantic tradition of enjoying *varsha ritu.*[77] The two pavilions of Hayat Bakhsh garden in Red Fort, Delhi and Shalamar garden in Lahore are named after the monsoon months, *sawan* and *bhadon* with the characteristic to create the rain scene. The beauty of Babur's classic *chaharbagh* was the central watercourse and its flowing water. Most of these gardens were divided into four quadrants by two axis comprised with water channels and pathways to carry the water under gravitational pressure[78] **(Plates: IV, V, VI, VII, VIII, IX; Plan: I**). At every intersecting point, there used to be a tank. In India, the early gardens were irrigated from the wells or tanks, but under the Mughals the construction of

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[76] Ibid., p. 165.

[77] For the details of the Hindu influence on Mughal gardens see Villiers Stuart, *Gardens of the Great Mughals*; Rotzer and Deokar 'Mughal Gardens', op.cit., pp. 131-169; G.H.R. Tilloston, *The Rajput Palaces: The Development of an Architectural Style, 1450-1750,* (N.Delhi, 1987), pp. 190-196; M.C. Joshi, *Dig, ASI,* (N.Delhi, 1982), pp. 1-35; Monica Juneja (ed.), *Architecture in Medieval India,* pp.549-559; Fairchild Ruggles, *Islamic Gardens*, p. 135-38.

[78] Irfan Habib,'Notes on the Economic', op.cit., p.127; Sylvia Crow et.al, pp.16-17; James Dickie, 'The Mughal Garden', op.cit., p. 128; Syed Ali Nadeem Rizavi, 'Iranian Influence on Medieval Architecture' in Irfan Habib, ed., *A Shared Heritage, the Growth of civilization in India and Iran,* (*AHS*, 2002), p. 129.

canals or the use of existing canals for the gardens provided more adequate and dependable water supply.[79] Thus, the most important aspect of the waterworks of gardens was the permanent source of water supply. The hydraulic system needs enquiry about the 'outside water source' as well as 'inside distribution of water' in the paradisiacal Mughal gardens.

The principal source of water to the Mughal gardens were: (i) lakes or tanks (ii) wells or step-wells (iii) canals, harnessed from the rivers, and (iv) natural springs.[80]

Tanks or lake have been used as a main source of water in Northern India since long.[81] After the battle of Panipat the first site visited by Babur was *hauz-i shamsi* (Iltutmish) and *hauze-i khas* (Khalji).[82] Babur's description that Hindustan lacks 'running water'[83] is not tenable because evidence of the presence of tanks and canals speak otherwise. Thus, Babur's observation may be gauged from the garden point of view. The hydraulic projects, in India, were meant to provide water for cultivation of crops while Mughals eulogized gardens with free flowing water.[84] Secondly, his description was centered around Agra region which was deeply dissected terrain with restricted canal development. Babur himself mentions the existing reservoir and tank, on which he constructed garden at Dholpur and Fatehpur Sikri, for that water was lifted through Persian Wheel.[85]

In Deccan plateau of India, the use of lake and dam, existed from the ancient time and technologically to feed the gardens, was understood by the Kakatiya's time. This

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[79] Moynihan, *Paradise as a Garden,* p. 100.

[80] Cf. Iqtidar Hussain Siddiqui, 'Water-works and Irrigation System in India during Pre-Mughal Times', *Journal of the Economic and Social History of the Orient,* (Feb., 1986), Vol. 29, No. 1, pp. 52-77; Irfan Habib, *Agrarian System of Mughal India (1556-177),* second edition, *(*New Delhi, 1999), pp. 24-36; See also, Sadaf Fatma, 'Waterworks in Mughal Gardens', *PIHC,* (New Delhi, 2013), pp. 1268-78.

[81] C.f. Irfan Habib, *Agrarian,* p.30. He has cited the example of Sudarshan lake at Girnar built under Chandragupta Maurya used for irrigation under Ashoka.

[82] *Baburnama*, p. 176. Anthony Welch, 'Gardens that Babur did not lik', op.cit., p.61. Ibn Batuta informs that *Hauz-i Shamsi* served for irrigation and its source of water was not only rains but the river Jamuna also (Ibn Batuta, *The Travels of lbn Battuta*, Eng. tr. Sir Hamilton Gibb, (Cambridge 1971), vol. 3, p. 624). Evidence shows the presence of tanks, lakes and cisterns in the regional kingdom of Delhi Sultanat like Kankariya tank in Ahmadabad around which a number of villas and pleasure gardens were constructed (*Mirat* (Suppl) pp. 18-19).

[83] *Baburnama*, p.191, Eng. tr., pp. 486-87.

[84] Anthony Welch, 'Gardens that Babur did not like', op.cit., p. 89.

[85] *Baburnama,* pp. 216-18, 223, 225-6, 244; Sylvia Crow et. al, pp. 35, 74.

ancient system was prevalent during the Bahmani period also.[86] Likewise the main source of water in Golkunda fort, which was inherited by the Qutubshahi rulers from the Rajas of Warangal (1512AD), and its garden was Durgam Cheruvu Lake, located in the hillocks of Jubilee Hills. As the lake was on 552 mt. height, around 20 kms distant and had to travel to the main tank of the fort which was again on 525mt. height; so the technology used for that was not only the principle of siphoning based on gravitational force but the application of Boyle's law according to which gradual decrees in the diameter of pipelines led to the increase in the pressure needed for the transportation of water to the height without the help of modern technology.[87]

In the Upper Gangetic plains, wells were the chief source of irrigation.[88] The wells became important for watering the Mughal gardens which were variously termed as *chah* or *wa'in* or *ba'oli* (well with stairs).[89] Babur ordered to build a 'chambered well' (*wa'in*) on the site of his first garden Ram Bagh at Agra.[90] Well as a source of water was so common that sometimes inspite of rivers in close proximity, wells were used to irrigate the gardens. For example, though river Betwa was not far from the gardens of Orcha which was built by the Bundelas on an Island yet the water for the gardens was obtained by wells.[91] The use of step-wells was in vogue in India from ancient times and continued to be effectively used by the early Mughals to feed their gardens.[92] The water lifting device for Mughal gardens from wells and step-wells was the '*charas'* or the 'leather bucket', lifted by yoked oxen, pulling a rope thrown over a pulley **(Plate: X).** This was the most common device used near Agra which was criticized by Babur as 'laborious and filthy way'[93]. Another device was the 'surface wheel' (Ar. *noria*) based on lever principle which was installed on the sides of lake and was generally in use wherever

[86] Daud Ali, *Gardens and Ladscape Practices*, p. 53.
[87] Boyle's law describes the proportional relationship between the absolute pressure and the volume. Sanjay Subodh, 'State, knowledge and construction: A case Study of regional States' (Unpublished), paper presented at National seminar on the theme *State and Medieval India* in CAS, Deptt. of History, AMU Aligarh, p. 5.
[88] Irfan Habib, *Agrarian*, p. 28.
[89] Iqtidar Hussain Siddiqui, 'Water-works and Irrigation System', op.cit., pp. 64, 68-70. A large number of wells were constructed not only by the Delhi Sultans but also by the regional Sultans of Gujarat and Malwa etc.
[90] *Baburnama*, p. 211.
[91] Fairchild Ruggles, *Islamic Gardens*, pp. 135-36.
[92] Nadeem Rizavi, 'Exploring the Mughal', op.cit., p. 896.
[93] Irfan Habib, *Agrarian*, p. 28. For the mechanism of *charas*, see *Baburnama*, p. 191.

the water level was close to surface[94] **(Plate: XI)**.The most effective water lifting device for garden was '*rahant/arhant'* or '*saqia'* or 'Persian Wheel'[95] **(Plate: XII)** which Babur found as a novelty (because he had not witnessed it in Central Asia and Afghanistan) with its chain of pots and pin-drum gearing.[96] Water was lifted to the great height at Fatehpur Sikri by a series of geared wheel installed there.[97] According to Elizabeth Moynihan, Persian Wheels known as *rahant* in India were built into the corner towers of the supporting riverfront wall with supplemental wells on a lower terrace. These fed the water-courses and pools and their overflow irrigated the plots'.[98] Thus, *rahant* or *saqia* and *pur* or *charas* system provided water from the wells in the gardens of Humayun's tomb at Delhi, Akbar's gardens at Sikandra and Fatehpur Sikri, *Bagh-i Nilofar* of Babur at Dholpur, *Bagh-i-Jahanara*, *Bagh-i-Zahra* and *Bagh-i-Nursarai* at Agra, Shalamar Bagh at Lahore, *Bag-i Hayat Bakhsh* at Shahjahanabad and almost in all the Mughal gardens of plain region.[99] Moynihan drafted a water lifting plan which shows the stages of water lifting in the garden of Taj Mahal, a system which was earlier used by Akbar in the palace of Fatehpur Sikri (**Plan: II**). Interestingly, it was not only in the plain area but in the hilly area like Kashmir where water was in abundance, we find the reference of *rahat,* just to make the pressure more intense.[100] However, it was not only in the Mughal gardens but almost in all gardens, built by other nobles and rich persons in whole of the empire, such as in the Bahmani and Qutubshahi gardens of Deccan, gardens of Gujarat and Punjab etc., that this system of water lifting devicefound in use.[101] In the basaltic and

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[94] Iqtidar Hussain Siddiqui, 'Water-works and Irrigation System', op.cit., pp. 66 and note.

[95] This device was also known as *arhat* or *rahat* equivalent to Arabic *saqia,* Persian *charakh* and Persian wheel in English. Cf. Iqtidar Hussain Siddiqui, 'Water-works and Irrigation System', op.cit., p. 65.

[96] *Baburnama,* p. 191, Eng tr., p. 486; Irfan Habib, *Agrarian,* p.28. Undoubtedly Akbar made certain improvements by inventing pin drum gearing which enabled water to be lifted from distant lowering places (Irfan Habib, 'Akbar and Technology' in *Social Scientist,* (Sep. - Oct., 1992), Vol. 20, No. 9/10, p. 8).For the mechanism of Persian Wheel, see also Abul Fazl, *Ain-i Akbari***,** ed. Blockman, I, p. 199; Iqtidar Hussain Siddiqui, 'Water-works and Irrigation System', op.cit., pp. 63-65.

[97] Irfan Habib, *Medieval India: The Study of Civilization*, (New Delhi, 2007), p. 202.

[98] Moynihan, *Paradise as a Garden,* p. 102.

[99] Neeru Mishra and Tanay Mishra, *The Garden Tomb of Humayun-An Abode in Paradise*, (New Delhi, 2003), pp. 114, 120; Sylvia Crow et. al, pp. 31, 35; Irfan Habib, 'Notes on Economic', op.cit., p. 133; Moynihan 'The lotus Garden Place, op.cit., p. 141; R. Nath, 'Bagh-i- Gul Afshan', op.cit., p. 2.

[100] Pir Ghulam Hussain Koyahami, *Tarikh-i Hasan,* ed. Sahibzada Hasan Shah, (Srinagar, 1954), Urdu tr. by Shams-ud-din, *Shams-ut-Tawarikh*, (Srinagar, 2003), p. 296.

[101] Klaus Rotzer and Pushkar Sohoni, 'Nature, Dams, Wells and Gardens: The route of Water in and around Bidar', in ed., Daud Ali, *Gardens and Ladscape*, pp. 54-73; Yazdani, *Bidar:Its History,* p. 53; Sadaf Fatma, 'Gardens in Mughal Gujarat', op.cit., pp. 441-452.

plain laterite of Bidar, besides dam or lake, water harvesting was done sometimes by indigenous and sometimes by imported techniques from the Persian World during the 15th and 16th century. After surveying the gardens of Bidar, Rotzer and Sohoni report that besides dams or lake, the 'well' was the most important features in Deccani gardens which was of three types: (i) *baolis* with staircase, (ii) wells comprising a vertical square shaft with water lifting device, and (iii) *qanat*, horizontal wells with manholes.[102] The royal garden of Bidar bellow the Takht Mahal was fed by two *baolis*, two wells and two *qanats* simultaneously.[103] Former two sources of water were indigenous and were in use in Northern India also but the last one was adapted in Deccan by the immigrants from Iran, even before the coming of the Mughals.

The most important development was the construction of canals by harnessing of big rivers in Northern India. Although the famous canal *Nahr-i faiz* or *Nahr-i bahisht* also known as *Shahnahr* (royal canal) which provided water to the gardens near the capital Delhi was built under the reign of Shah Jahan, its origin goes back to the canal of Firozshah Tughlaq (modern West Yamuna canal) that originated from the river Jamuna[104]. This was the main canal, in the palace of Shah Jahan, flowed like the 'water of life' from the *shah burj* through *hammam*, *diwan-i-khas*, *khwabgah* and *rang mahal* and its branches served the individual gardens and houses. The pavilion and halls for the emperor Shah Jahan and his *zanana* were threaded with this canal along the riverfront and it became the source of water for the two gardens, Hayat Bakhsh and Mahtab bagh, of the palace and also for its two pavilions *Sawan* and *Bhadon.*[105] The main tank of the garden of Hafiz Rakhna was filled by a canal which was cut to Sirhind by Sultan Firozshah Tughlaq (1360 AD) and worked uptil the reign of Jahangir. After that it may

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[102] Rotzer and Sohoni, 'Nature, Dams, Wells', op.cit., pp. 56, 58.
[103] Ibid., p. 65.
[104] Firozshah's canal was repaired by Akbar but was again silted up. Shah Jahan decided to reopen it from its mouth Khizrabad down to Safedon and from there dig a new channel (the canal), nearly 80 miles in length for the use of his new city Shahjahanabad. Ali Mardan Khan's name is generally associated with this canal but his name is given only in the later traditions. cf. Salih Kambuh, *Amal-i Salih,* III, p. 29; Syed Ahmad Khan, *Aasar-us Sanadid*, ed., Tanveer Ahmad Alvi, Urdu Academy, (New Delhi, 2011), pp. 135-36; Irfan Habib, *Agrarian,* pp. 33-34.
[105] Salih Kambuh, *Amal-i Salih,* III, p. 26; *Aasar-us Sanadid,* pp. 123, 127, 131, 135-36; Bernier, p. 257; Manucci, I, p. 184, II, p. 463; Zafar Hasan, *Monuments of Delhi: Lasting Splendour of the Great Mughals and Others*, (New Delhi, 1997), I, p. 21-22, 156-57; Ebba Koch, 'Mughal Palace Gardens from Babur' op. cit., p. 153; Ebba Koch, *Mughal Architecture, an Outline of its History and Development,1526-1858,* (Munich, 1991), p.111.

have gone dead because when Shah Jahan visited the place, he ordered to connect it with a canal to Sutlej.[106] Another important canal 'Shahnahar', providing water to the gardens of Lahore, was excavated during the reign of Shah Jahan and took water from the river Ravi at Shahpur up to Lahore, a distance of 84 miles.[107] This canal, also known as Hasli canal, was constructed on the advice of Ali Mardan Khan, a famous canal engineer and viceroy of Lahore and Kashmir in the year 1631 AD with the help of Mulla Alaul Mulk Tuni, an expert in hydrology. It was after the completion of this canal that the site of the famous pleasure garden Shalamar of Shah Jahan was chosen. Initially it provided water only to the Shalamar garden but later on the *ulema* and nobles were also allowed to irrigate their gardens.[108]

In Kashmir where the source of water was natural springs, the Mughals laid out canals to water their garden easily from the streams coming down from the surrounding mountains.[109] In Kashmir, canals had been excavated even before the comings of the Mughals. Pir Ghulam Hussain Koyahami, the author of *Tarikh-i Hasan* informs us that Sultan Zainul Abidin laid out a canal named *Shah ju-i nahr* to water the gardens and for the general use of public which was the fifth canal of the river Sandhar.[110] Later the Mughal nobles brought out the water of the same canal to the garden *Bagh-i Ilahi, Bagh-i-Bahr Ara, Bagh-i-Gulshan, Darshani Bagh* and *Bagh-i Inayat* etc.[111] There were so many other canals in Kashmir to feed the gardens.[112] Jahangir built a canal named '*Jui-i-Shahi'* to water his garden Nur Bagh from Lar (Sind) and Shah Jahan laid-out another canal named 'Shahnahr".[113] A canal was built by Jahangir to water the Shalamar Bagh brought out from the river Haroon which was further carried out by Asaf Khan for his

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[106] Firishta, *Rise of mohamdan Power in India,* tr., john Briggs, (London, 1829), I, p. 453; Subhash Parihar, *Mughal Manuments*, pp. 11-12.

[107] Bernier, p. 396; Irfan Habib, *Agrarian,* p. 36.

[108] Lahori, *Padshahnama*, I (ii), pp. 24-25; Latif, *Lahore*, pp. 55, 142, 253; Muhammad Ishtiyaq Khan, *Shalamar:The Glory that was,* published by the department of Archaeology and Museum, Ministry of Culture, Archaeology, Sports and Tourism, Government of Pakistan, Karachi. Also see, Sadaf Fatma, 'Waterworks in Mughal Gardens', op.cit., pp. 1268-78.

[109] Irfan Habib, *Agrarian,* p. 39.

[110] *Tarikh-i Hasan*, pp. 149-50.

[111] Ibid., pp. 149-50, 297, 299, 302-07.

[112] Ibid., pp. 141, 146, 149-50, 299.

[113] Jahangir, *Tuzuk-i Jahangiri,* ed., Syed Ahmad, (Ghazipur and Aligarh, 1863-64), p. 347; Lahori, *Padshahnama*, I (ii), pp. 24-25.

garden Nishat Bagh but was later stopped by Shah Jahan.[114] The author of *Tarikh-i-Hasan* furnishes very interesting information that in 1663 AD, after seeing the incomparable beauty of the garden, Shah Jahan praised the gardens three times that ‘it is a good garden and very beautiful’ with the expectation that Asaf Khan would offer to the royal presence but he remained silent which made Shah Jahan upset and he ordered to stop the canal to Nishat garden. One day Asaf Khan slept in melancholy (*gham-o ranj)* but he wake up with the noise of the rippling fountains and cascades and came to know that the stopped canal was opened by the gardener (*baghban*) since they were worried for the condition of his master. On this, the gardener was weighed in gold by Asaf khan. When the news reached the emperor, he was summoned to the court but Shah Jahan presented him a robe of honour (*khil’at*) and issued a *farman* to reopen the canal to Nishat Bagh, especially on the condition that it should not be harmful to the houses (*makan)* and crops *(zara’at)* of the villagers on the way and should be used for agriculture (*kheti*) forever.[115] Thus, the construction of canals provided more dependable water supply and the watercourse became wider studded with fountains on the principle of pressure.[116] Even in the early eighteenth century, the green and fresh gardens in the desert area like Jaipur, were irrigated by the canals. The documentary evidence shows that there was a special canal, *Nahri Bagh Ke Baste,* constructed especially for the use of a large number of gardens and the water of which was also carried towards the Amber gardens.[117]

The first and foremost example of the gardens irrigated by natural springs in Mughal India comes from Kashmir. On account of the natural springs, there was availability of water in abundance needed for the beautiful gardens. Thus, even at the time of independent Sultans, there were a large number of gardens in Kashmir. Wherever

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[114] *Tarikh-i-Hasan,* p. 146; Also, Sadaf Fatma, ‘Waterworks in Mughal Gardens’, op.cit., pp. 1268-78.

[115] This is visible in the text of *Tarikh-i Hasan* and Villiers Stuart account. Whatever may be the cause but Villiers Stuart says that when Asaf Khan woke up with the noise of running water, he inquired the matter and after knowing that it was opened by the servant Asaf Khan rebuked him for his zeal and hastily had the stream closed again. Whereas, *Tarikh-i Hasan* informs us that ‘Asaf Khan weighed the gardener in gold’ (*Tarikh-i Hasan,* pp. 302-307; Villiers Stuart, *Gardens of the,* pp. 168-170).

[116] Moynihan, *Paradise as a Garden,* p. 100.

[117] *Kapad-Dwara*, map and Note No. 170-First quarter of 18th century. The Document is preserved in the Rajasthan State Archives, Bikaner. I am thankful to my friend Farhat Kamal, who is working on the Jaipur city, for providing and translating the documents for my use.

a suitable and beautiful place around natural springs was found, Sultan Zainul Abidin used to lay the foundation of buildings and gardens.[118] After coming of the Mughals, it literally became a *gulistan* as innumerable gardens were built by the emperors and their nobles around natural springs.[119] The gushing water of the natural springs was supplied to the gardens sometimes directly and sometimes through canals and made all the decorative features like fountains and *abshars* more lively. Like Kashmir, the mountain garden at Wah (Taxila) received water from natural spring. On the basis of excavated trenches, it has been noticed that a number of natural spring welled up at different spots in the garden. The direction of the source of water was flowing from southern hillside to the north. The water accumulated in the central pond and was further directed westwards and finally collected in the main tank, which ultimately bifurcated into various channels.[120]

In Bidar, Bahmanis created extensive underground canals or wells (*qanat*) from the mouth of the spring by widening rift in the rock, engineered by the Afaqis to irrigate the fort and gardens.[121] The valleys bellow these springs provided space for plantation and gardens. For example, in 1671 AD under the reign of Aurangzeb, the Mughal governor Mukhtar Khan built a terraced garden called as Farah Bagh (garden of joy) bellow the spring in the valley of Ahmadnagar.[122] As Bidar's hydrology was Basaltic in nature and did not allow permeation of water, the recharging of groundwater through *qanat* added the concentration of water to the desired point. To improve the flow of the spring, a tunnel was carved out into the aquifer to create *qanat* which was a familiar device for the Iranian engineers to maximize the quantity of water obtained.[123] These *qanats* were the sloping subterranean tunnels dug into the alluvium or sedimentary rock to pierce the underground water table with square manholes at closely spaced intervals in order to have access to the channel to clear the blockade. This gravity for flow of water

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[118] *Tarikh-i Hasan,* p. 293-94.
[119] Ibid., pp. 293-316.
[120] Makin Khan, 'An Introduction to the Historical', op.cit., pp. 466-67.
[121] Ali Akbar Hussain, *Scent in The Islamic Garden*, p. 29.
[122] *Epigraphia Indo-Moslima, 1927-28,* p. 33; Yazdani. *Bidar: Its History,* p. 176-77.
[123] Rotzer and Sohoni, 'Nature, Dams, Wells', op.cit., p. 64. *Qanat* is an Arabic word meaning subterranean canal or conduit of water. Persian word for the same is '*karez'.* The *qanat*, horizontal well, was invented in Iran and dates back to 500 B.C. For the detailed mechanism of *qanat* in Iran, see Sylvia Crow et. al, pp. 31-32; A.K.S. Lambton, 'The *Qanats* of Yazd', *Journal of the Royal Asiatic Society,* Third Series, Vol. 2, No. 1.

supply was suitable especially for the dry region as it allowed minimal loss of water through evaporation and also to create the pressure needed for the fountains in gardens.[124] Thus, the main source of water for Bidar fort and its garden was *qanat*. Generally water architecture in medieval India is associated with the coming of the Mughals but in Deccan, Bahmanis made the use of hydrology in their fort much before that, as the remains of broken devices like pipes, cisterns, water channels and fountains are still found. [125]

The waterworks inside the Mughal gardens often denote 'symbols'. The terraces in Mughal gardens, it is believed, represented those of the *Quranic* gardens of the Paradise.[126] Octagon pools and platforms in their early gardens was a favourite design of the Mughals but later Shah Jahan usually used the square. So the octagon, evolved from the squaring of the circle, symbolizes reconstruction of the material side of man, represented by the square with the circle of eternity.[127] As it is believed, four water channels symbolize the Islamic heavenly rivers of honey, milk, wine and water and also represent four rivers of life.[128] The *Quranic* four rivers also symbolize the four rivers of Eden.[129] Walcher tried to symbolize water, trees and gardens and narrates that water decodes 'as the Christian and Muslim symbol of moral and sacred purification; the fish as unequivocal symbol of life; the towering cypress trees pointing to the metaphysical after-life and as symbol of death; and lastly, the garden as universal metaphor for the positive and symbiotic relation between man and nature, where water channels give

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[124] Sanjay Subodh, op. cit., p. 3.

[125] Yazdani, *Bidar: Its History,* p. 1 & n; Rotzer and Sohoni, 'Nature, Dams, Wells', op.cit., p. 63. Yazdani is of the view that '*qanats* were probably first introduced in Bidar during the Bahmani period by Persian immigrants and were used in the fort and the city for supplying drinking water and for irrigation'. After that this technology was re-exported to other basaltic traps of the Deccan at Bijapur, Ahmadnagar, Aurangabad and Burhanpur by 16th century but not in the northern region of India.

[126] Moynihan, *Paradise as a Garden,* p. 100.

[127] Ibid.; Sylvia Crow et. al, pp. 17, 20.

[128] *Quran,* 47:15. Apart from the symbolic features of Mughal gardens from the water point of view, there were other symbols of Mughal gardens corresponding to the Paradise like the symbol of chinar tree, other fruit trees and flower beds etc. Villeirs Stuart has given her own version of symbology with Hindu culture. Also see Villiers Stuart, *Gardens of the*, pp. 20, 46-47.

[129] There are four rivers in the Garden of Eden to water the garden namely Pison, Gihon, Tigris and Eupharates (The Complete Parallel Bible, (Oxford University Press, 1989), Genesis 2, 10–4).

replenishment, green trees render comforting shade, and fruit orchards extend pleasure and nourishment'.[130]

The fountain was the symbol of 'life cycle' which rises and merges and rises again. The Paradise possessed two fountains: '*salsabil'* and '*uyun'*.[131] Salih Kambuh , a native of Lahore, described very artistically the water system and its symbolic meaning in the garden of Shalamar at Lahore that 'in the center of this earthly paradise a sacred stream flows with its full elegance and chanting, fascinating and exhilarating nature and passes through the gardens irrigating the flower beds. Its water is as beautiful as greenery. The vast stream is just like clouds pouring rains and opens the doors of divine mercy. Its chevron patterns (*abshar)* are like an institution of worship where the hearts of believers are enlightened.'[132] However, in Mughal gardens, water became the central theme. In the lack of water, one cannot even think about the existence of Mughal paradisiacal gardens.[133] When Babur came to India he was in search of hillside spring like Persia and Central Asia where he could lay symmetrical terraced garden with rippling water from one terrace to another in a series of waterfall which was later found in Kashmir and at Wah where gardens were laid-out with certain improvement and development by his successors. But when Babur reached Agra, he disgusted and criticized its lack of 'running water' (*ab-i rawan*) from the point of constructing gardens.[134] Thus, he stressed on running water in his garden that water should be made to flow by means of wheels (*charkhaha*) erected wherever he might settle down and built artificial terraces with water-chutes and fountains to fulfill his ideal of garden in the *Bagh-i- Nilofar* (Lotus garden at Dholpur), Ram Bagh (*Aram Bagh* or *Bagh-i Gulafshan*) and *Bagh-i-Hasht Bahisht* located on the bank of river Jamuna at Agra.[135]

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[130] Heidi A. Walcher, 'Between Paradise and Political Capital: The Semiotics of Safavid Isfahan, in *Yale Forestery and Environmental Studies Bulletin,* (1998), vol. 103, p. 333. For the details on the symbolic interpretations of Iranian gardens which inspired the Mughals, see Hanaway 'Paradise on Earth: the terrestrial garden in Persian literature' and Ralph-Pinder Wilson 'Persian garden: *Bagh* and *Chahar Bagh*', in MacDougall and Ettinghausen (eds.), *The Islamic Garden.*

[131] *Quran,* 15:45; 26:57; 44:25; 51:15; 76:17.

[132] Salih Kambuh, *Bahar-i Sukhan,* fol. 119 as cited in Abdul Rehman, 'Garden Types in Mughal Lahore', op.cit., p. 164.

[133] Sadaf Fatma, 'Waterworks in Mughal Gardens', op.cit., pp. 1268-78.

[134] *Baburnama,* pp. 191, 210.

[135] Ibid., p.. 210; Nadeem Rizavi, 'Iranian Influence on Medieval, op.cit.*,* p. 130.

Ebba Koch's division of Mughal gardens based on architectural features into three formal versions of *chaharbagh* sheds light upon its 'water system' also: (i) a canonical cross-axial: the tomb of Humayun , (Delhi,1562-71AD) (ii) terraced: Shalamar garden, (Kashmir, 1620 AD, 1634 AD) and (iii) waterfront: Taj Mahal, (Agra, 1637 AD)[136] **(Plan: III).** In the first category comes typical *chaharbagh*, consisting of square, divided by cross axial paved walkways into four equal parts and later sub-divided into further quadrants with a garden pavilion or mausoleum or a pool (*hauz*) at its centre. The funerary gardens of Humayun, Akbar and Jahangir are the best examples of first category. The second type is natural terraced garden which the Mughals inherited from their homeland and developed in Kashmir by laying out on a slope into the landscape of the region. The water was collected from the spring and the individual terraces were given separate canonical four-part like the Shalamar garden of Kashmir. Thirdly the waterfront gardens where the source of water was not wells or an artificial tank of lively springs on a mountain slope but a large slow flowing river from where the running water was raised to the gardens. Babur's choice of the riverfront side created riverfront gardens as a module of the riverfront city, a *chaharbagh* with the main building on terrace overlooking the river. In this type the main building was not in the center as in the classic *chaharbagh* but was on the terrace (*kursi*) running along the riverfront and the *chaharbagh* component was on the landward side. Taj Mahal was its best example and after idealized there, this scheme was used in the residential garden Angoori Bagh in Agra fort by Shah Jahan. Later it was adopted in Shah Jahan's new city Shahjahanabad at Delhi for the gardens and courtyard of Red Fort. It was also realized, to certain extent, at other Mughal capital Lahore.[137] However, this type of scheme was adopted by Babur himself in his early gardens at Agra opposite the side of Taj. Thus the aim of the planners of Taj was to make perfect example of the existing waterfront gardens and then to enhance it to the level beyond the approach of common mortal in order to create an ideal paradiascal garden for the deceased. However, it is possible that basically this model was

[136] Ebba Koch, *The Complete Taj Mahal*, p. 24

[137] Ibid., pp. 23, 29, 32, 69. For details of Angoori Bagh at Agra Fort and Mahtab Bagh at Red Fort, see Salih Kambuh, *Amal-i Salih*, II, pp. 6-7, III, pp. 22-36; Lahori, *Padshahnama*, I, (ii), pp. 223-25, 240-41; *Aasar-us Sanadid*, pp. 127, 128,131; Moynihan, *Paradise as a Garden*, pp. 136-38; Ebba Koch, 'Mughal Palace Garden from Babur', op.cit., pp. 148, 149, 153-54, 156, Idem, 'The Mughal Waterfront Garden', op.cit., p. 144.

inspired by Timurid model of waterfront garden mentioned in the Persian manual *Irshad-al-Zira'a* written by Qasim Ibn Yusuf in Herat in 1515AD. [138] The riverfront garden scheme on the bank of river Jamuna at Agra and Delhi resembles the gardens in the capitals of two other great Muslim empires: Ottoman's Istanbul where royal and non-royal suburban garden villas were situated on the bank of river Bosporus; and the Safavid Isphahan garden residences on the shores of the river Zayandah which Shah Jahan's court poet also compares.[139]

The Mughals developed hydraulic system by using Persian wheel to lift the water and obtained adequate pressure necessary for gardens. The main reason behind the location of gardens on the bank of river was that water was raised to the level of the enclosure wall by Persian Wheel standing on the bank from where it was conducted through aqueduct, to the garden where it ran from the top of the wall in a terra-cotta pipe which also produced adequate pressure needed to work the fountains.[140] Thus, the gardens in Mughal Gujarat such as Fateh Bari, Shahi Bagh and Rustam Bari etc. were built on the bank of rivers.[141] In the Shalamar garden of Lahore, built on three terraces, the main source of water was canal (Shahnahr) built by Ali Mardan Khan but as the strong current was needed to fill the large tank in the second terrace and for remaining cistern in the third terrace, two large wells *Baran Hataa* (twelve wheels) were constructed outside the garden in the West and East side of the uppermost terrace and aqueduct were constructed on the top of the wall to convey the water of the wells to the second and third terraces[142] **(Plate: XIII).** In the garden of Hafiz Rakhna at Sirhind, Subhash Parihar has found two wells whose parapet was built very high through the channels topping the enclosing wall of the garden from where water rippled down the chutes and gushed out the fountains.[143] The water was usually drawn from the wells to the raised reservoir in Mughal gardens.

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[138] Cited by Lisa Golombek, 'The Gardens of Timur, op. cit., p. 139; Ebba Koch, 'The Mughal Waterfront gardens', op. cit., pp. 142-44.
[139] Ibid., op. cit., p. 143.
[140] James Dickie, 'The Mughal Garden', op.cit., p. 113; Also see, Sadaf Fatma, 'Waterworks in Mughal Gardens', op.cit., pp. 1268-78.
[141] For detail of the gardens in Mughal Gujarat see Sadaf Fatma, 'Gardens in Mughal Gujarat', op.cit., pp. 441-452.
[142] Latif, *Lahore*, p. 247.
[143] Subhash Parihar, *Mughal Manuments,* p. 13; Subhash Parihar, *History and Architecture,* p. 205.

Usually the main channel which used to connect the water source and garden, was aqueduct, which conducted the water to the tanks or pool for further distribution whether in the gardens of plain or on the mountainous gardens in Kashmir and at Wah.[144] The wide discourse of water channels placed the Wah garden in a distinctive category. Excavations reveal that the water channel emerging from the northern center of the main tank first ran northwards and then after 98 feet turned to the west to run parallel to the Northside of the tank. It gradually converged towards the side of the tank and at one point the span between the channel and the side wall of the tank was reduced to 87 feet. At this point another channel measuring 5 feet crossed the northern channel at right angle. It formed the base-line for further dividing the northern channel into three short channels that ran parallel from the northwestern side of the first terrace towards the second terrace. It was wider than its supply channel. The water channels exposed on the first terrace which measure 2 feet 9 inches in width while the channel on second terrace, measure 5 feet three inches in width, and the other side channels exposed measure 4 feet 2 inches each. The variations in the width of channels on first and second terraces are worth-noting. Moreover, the southern channel, issuing from the bottom of the hillock, measure three feet in width, ran from east to west along the mountain on the southern side of the main tank. This system of water channels, concludes Makin Khan, is a remarkable example of garden planning and constructional technology.[145] In the Wah garden, the supply of water entered into the main tank by a single arched channel which was exceptionally large with a dimension of 214'x 220', made of brick but remains revealed additions and alterations to the original structure.[146] Furthermore, excavations unearthed seven elegant arches on either side of the platform found on the eastern side, in which only one arch was blind[147] **(Plate: XIV).** Likewise**,** in the garden of Vernag built by Malik Haidar, a Kashmiri engineer of Mughal Court on the behest of Jahangir, from the natural spring which is considered as the source of river Jhelam (Bihat), there was a huge octagon reservoir of 20 yards by 20 and of 4 *gaz* in depth, around which Vernag garden

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[144] Ebba Koch, *The Complete Taj Mahal,* p. 57; Moynihan 'The Lotus Garden Palace', op.cit., p. 141; Mohammad Azher Ansari, 'Palace and Gardens of the Mughals', in *Islamic Culture,* (1959), vol.33, p. 68; Makin Khan, 'An Introduction to the Historical', op.cit., pp. 462-63.
[145] Makin Khan,'An Introduction to the Historical', op.cit., p. 462-63.
[146] Ibid., p. 460.
[147] Ibid., p. 462.

was laid out by Jahangir in 1619-20 AD.[148] Jahangir ordered to surround the octagon spring pool with stone walkways (*khiyaban-i sang)* and construct a garden with other buildings like *baradari* and *hammam*. From the arched octagon reservoir with its complex of domes and niches, there started a long and straight water canal of 180 *gaz* in length, 4 *gaz* in width and 2 *gaz* in depth towards the gate of the garden in the North and further discharged and disappeared into the river Jhelum[149] **(Plate: XV).**

Sometimes canals directly entered to the gardens through the wall and travelled the whole garden through the terraces by supplying waters to the pools, water-chutes and fountains. In the Shalamar garden of Lahore, the canal brought from the river Ravi entered the garden from South, flowing the main canal and filling the central tank, intersected the beautiful garden and discharged itself in the main tank of middle terrace by rippling its water through marble cascade and from there the canal water was passed into the lower terrace. Eventually it flowed out via the Northern side of the Shalamar garden.[150]

Thus, to feed the Mughal gardens with gushing water, there were two forces that worked: the 'natural gravitational force and the 'artificial gravitational force'. The natural gravitational force was applied in the naturally terraced garden like the gardens of Kashmir which offered a new opportunity like Persia where water was not laboriously raised with wheel from the mountain but steep mountain slope provided dramatic water landscape. Powerful streams and springs from the hills fell in the garden with strong force over water-chutes, fountains and pools. Terrace succeeded over the terrace through the artificial waterfall like the three terraces of Shalamar, twelve of Nishat Bagh, six of Pari Mahal, seven of Dara Shikoh's garden, three of Wah Bagh near Hasan Abdal, six of

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[148] *Tuzuk*, pp. 34-35, 292, 298, 313; Bernier, pp.413-14; Sylvia Crow et. al. pp. 11-12; Jan Haenraets, (ed.), *Mughal Gardens of Kashmir:* (Towards UNESCO World Heritage Nomination), (Kashmir, 2013), p. 15. The literal meaning of the word Vir-nag is 'worship of snake'. It was a place of worship since earlier times. Jahangir visited the place twice during his father's time. One characteristic of the grand pool of the garden was that it was full of fishes as described by Jahangir and Bernier. The place was so dear to Jahangir (and Nur Jahan) that he wished to be buried there.

[149] *Tuzuk,* pp. pp. 34-35, 292, 298, 313; Sylvia Crow et. al. pp. 11-12.

[150] Latif, *Lahore,* pp. 140-41, 142; Muhammad Ishtiyaq Khan, op.cit. For the details of the Shalamar garden at Lahore see also, Mohammad Shafi, 'The Shalimar Garden of Lahore', op.cit., pp. 58-66; H.I.S. Kanwar, 'Origin and Evolution of the Design of the chaharbagh Garden', *Islamic Culture*, (1974), vol. 48, pp. 105-117; Azher Ansari, 'Palace and Gardens of the Mughals', op.cit., pp. 50-72; James Dickie, 'The Mughal Garden', op.cit., pp. 128-137; Moynihan, *Paradise as a Garden,* pp. 141-45.

the Fidai Khan's garden in Pinjor where they took the advantage of natural slope running down to the Ghagghar torrent and many more.[151] The artificial gravitational force exercised in those gardens in which terraces were not natural like Kashmir. The Mughals made artificial terraces even on the slightly slopping site to provide gardens the artificial gravitational flow and after that the hydraulic pressure by Persian wheel made the flow smoother.[152]

Inside the gardens they used wells, octagon and square tanks in the corner of the garden to provide the water through water channels to the central tank and to the whole garden by cascading into different tanks or pools and also through terra-cotta pipes to the plots of flower and fruit beds for irrigation and especially to the fountains.[153] A separate underground channel was also there which took its course from the original tank to the central tank.[154] However, generally the Mughal gardens had wells outside the enclosure where Persian wheels were installed to fetch the water and distribute it in the inside tanks and *hauz* etc. The same feature was found in number of Mughal gardens in Banaras and Golkunda. However, according to Rotzar and Sohoni the aim was totally different in Mughal gardens where to feel a typical paradise, Mughals separated the manual labour, sweat and noise from the soothing experience of Paradise; whereas in the later gardens of Banaras and early gardens of Golkunda the purpose was not the separation of tedious labour from the paradise but was the public accessibility of water.[155] In the eighteenth century gardens of Banaras, with Mughal features, wells outside the enclosure were built for irrigation and water decorative devices of gardens as well as for general public use, such as a well in the Shish Mahal garden, four wells in the royal complex of Ramnagar, two wells in the gardens of Raja Talab and Rani Bazar, 3 wells in Ratanbagh garden and

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[151] Bernier, pp. 398-401, 413; Sylvia Crow et. al, pp. 38, 94, 130; Moynihan, *Paradise as a Garden,* pp. 127-28; G.M.D. Sufi, *Kashir: Being a History of Kashmir from the Earliest time to our own,* (Lucknow, 1974), vol. II, pp. 515-537; Sylvia Crow et. al, pp. 38, 94, 130; Moynihan, *Paradise as a Garden,* pp. 127; Azher Ansari, 'Palace and Gardens of the Mughals', op.cit., pp. 69-71; Subhash Parihar, *Mughal Manuments,* p. 14.

[152] R. Nath, 'Bagh-i- Gul Afshan', op.cit, pp. 18-19; Neeru Mishra, *The Garden Tomb,* pp. 107-113.

[153] Ebba Koch, *The Complete Taj Mahal,* p. 42; Moynihan, *Paradise as a Garden,* pp. 105-6, 114; Neeru Mishra, *The Garden Tomb,* pp. 113-14, 115; Salim Javed, 'Mahtab Bagh: An Imperial Mughal Garden at Agra', *PIHC,* Kannur session (New Delhi, 2009), pp. 1086, 1087.

[154] R. Nath, 'Bagh-i- Gul Afshan', op.cit., pp. 19-20.

[155] Rotzer and Deokar, 'Mughal Gardens', op.cit., pp. 144; Rotzer and Sohoni, 'Nature, Dams, Wells', op.cit., p. 63.

two wells in the Salarpur garden and Pokhra complex.[156] Outside the Pokhra garden at Banaras, platters of the preparation of *bhang* was found in the survey by Rotzer near one of the two wells. It suggests that it was the center of *bahri alang*.[157]

An important architectural feature of the gardens was the pavilion set within water, like in the Shalamar gardens of Kashmir and Lahore. In Kashmir, it is roofed **(Plates: XVI A & B)**, whereas in Lahore it is open **(Plate: XVII).** The inspiration of this type of floating pavilion goes back to the palace Madinat-al Zahra, which was built by the Umayyad caliph Abd al-Rahman al-Nasir, at Cordoba in 936 AD.[158] In contrast to Madinat-al Zahra, the water structure of Shalamar garden of Kashmir represents more mature form.[159] In an innovative way, Akbar introduced floating gardens in Kashmir. At the time of his arrival, floating gardens on thousands of boats were ready to welcome the emperor.[160] The Mughal tradition still continues in Kashmir. In the Dal Lake, house boats carry the gardens of vegetables and fruits. The first floating garden is associated with Humayun, under whom it was built like other wooden structure, such as wooden floating palace and bridge, on the river Jamuna. Often the emperor Humayun used to sail on them from Firozabad, Delhi to Agra with his courtiers. [161] Akbar also had, like his father, a special liking for floating gardens. In 1574 AD, during his march towards Bengal through river, some wonderfully fashioned boats were made, equipped with everything including the gardens and residences for the emperor and the nobles.[162] The author of *Akbarnama* praised the garden made on the boat and proclaimed that 'there were gardens on the boat such as clever craftsmen could not make on land.'[163]

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[156] Rotzer and Deokar, 'Mughal Gardens', op.cit., pp. 149, 157,159,161, 163, 165.
[157] Ibid., pp. 165, 166. *Bahri alang*- A common pastime of the inhabitants of Banaras, particularly the artisans in which they used to go to a well or *ghat* and joined friends where they prepared and consumed *bhang* (hemp) before leaving to the place of work.
[158] Fairchild Ruggles, 'The Mirador in Abbasid and Hispano-Umayyad Garden Topology', *Muqarnas,* (1990), VII, pp. 73, 75-76, 82 n.
[159] Ibid., p. 82 n.
[160] Sylvia Crow et. al, p. 78.
[161] S.M. Jaffar, *The Mughal Empire from Babur to Aurangzeb,* reprint, (Peshawar, 1936), p. 42; Idem, *Some Cultural Aspects of Muslim Rule in India,* reprint, (Delhi, 1939), p. 119. Under the instruction of Humayun, carpenters (*najjars)* made four boats for him to float on Jamuna. There were shops, *bazars* and gardens on those boats. It is said that especially the moving garden was made on the surface of the water of Jamuna for the emperor.
[162] Abul Fazl, *Akbarnama,* Eng. tr., H. Beveridge, (Delhi, 1973), III, p. 120; See also, Atul Chandra Roy, *History of Bengal:Mughal Period (1526-1765AD),* (Calcutta, 1968), pp. 513-14.
[163] *Akbarnama*, Eng. tr., III, p. 120.

Another unique Persian feature of Mughal garden was its underground room. During the time of Aurangzeb, an underground summer room was constructed, surrounded by water in the gardens of the watermill at Aurangabad, with all Mughal features. Soloman, who visited Aurangabad garden, was much impressed by its underground room. He termed this garden as 'secluded Moghul garden' with much charm and elegance.[164]

Other artistic water device was *abshar* (water-chute) and fountain which indeed gave life to the Mughal gardens. Water-chute was a characteristic feature of Mughal gardens. These water-chutes were, usually, made of marble or stone with the design carved as fish-scale (*mahipusht*[165]*)* **(Plate: XVIII)** and shevron (zig-zag) (**Plates: XIX A & B)** pattern to produce a rippling effect [166] Generally these water-chutes were connected with the source of water through water channels, from where the water was thrown up and broken into splashes by running over them. The water through the tank to the channels of causeways was down through chutes and the water from the canals in the garden also used to discharge from one terrace to another and from one pool to another or to narrow water channels through these marble chutes by rippling and cascading over these stone chutes. In Kashmir, where the source of water was natural spring, the ground was in the series of terraces and where waterfall became the striking feature, *abshar* looked much effective and magically beautiful **(Plates: XX A & B).** However, even in the plains with the slightest slope of only one or two feet, Mughals created charming waterfalls in their gardens[167] **(Plates: XIX A & B).** The abundance of water in Kashmir enabled its gardens to be more effectively cascaded into imaginative *chadars*. The *chadar*, meaning white 'shawl' of water, under the surface of crystal clear water with niches (*chinikhana),* in which flower vase was placed in the day and candle light at night behind the curtain of water, indeed looked much beautiful[168] **(Plates: XVI A & B).** Salih

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[164] W.E. Gladstone Soloman, 'The Garden of the Watermill: Aurangabad', *Islamic Culture*, (1936), X, pp. 88-93.

[165] In Persian it was called pigeon-breast. (Moynihan, *Paradise as a Garden*, p. 61).

[166] Neeru Mishra, *The Garden Tomb*, p.107; Nadeem Rizavi, 'Iranian Influence on Medieval, op.cit., p. 130. In a survey of the garden of Fatehpur Sikri conducted by AMU, Aligarh, a stone *abshar* with fish-scale design was excavated (Nadeem Rizavi, 'Exploring the Mughal', *PIHC*, p. 897).

[167] Neeru Mishra, *The Garden Tomb*, pp. 107-08.

[168] Salih Kambuh, *Amal-i Salih,* II, p. 2; Neeru Mishra, *The Garden Tomb,* p. 115; Nadeem Rizavi, 'Iranian Influence on Medieval, op.cit., p. 130;Idem, 'Exploring the Mughal', op.cit., pp. 896, 900; Zafar Hasan,

Kambuh has symbolized *chadar* and candle light of the Shalamar garden (Lahore) with sages and learned men. In his view, the chute of water together with the lamps appears to be spreading beads and arches along with cascades like that of scholarly people.[169] Similarly, in the contemporary hanging garden of *maunbari* in the vicinity of the palace of Amber in Rajasthan, there were hundred niches and before the arrival of the ladies at night oil lamps were placed by the attendants which created never ending irradiations and reflections amidst flowing water. [170] Modern scholar James Dickie terms *abshars* as 'transition in level' of the Mughal gardens. He further explains that since the Muslim mind apprehends reality in terms of pattern, the surface of the water has been inlaid with chevrons to emphasize the movement of water, or carved in a fish-scale pattern to produce a rippling, coruscating effect. Thus, water becomes a liquid arabesque. Finally, the water links dynamically the two levels: the upper, or tectonic; the lower, or vegetal.[171] The emperor throne was often built across the canals above a cascade and seemed to float on the water where water splashe out over the *chadar*[172] (**Plate: XVI, XVII).**

Fountain which symbolizes the life cycle by rising, merging and again rising became a very important feature of the Mughal gardens. According to *Mirat-i Sikandari*, the idea of constructing pleasure gardens with fountains in Persian style was first introduced in Sultanate Gujarat.[173] The single jet from Persian tank finally developed into hundreds of fountains in the later gardens of Shah Jahan.[174] The raised water produced pressure to work the fountain. The fountain, apart from the canal water, was also fed by independent arrangement which included wells and elevated large reservoirs outside the gardens. Generally an earthen colaba, made of glazed terra-cotta, supplied water to the

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Monuments, II. p. 117; III, p. 34; Muhammad Ishtiyaq Khan, op.cit.; Latif, *Lahore,* pp. 141,142, 247; Sylvia Crow et. al, pp. 108, 116, 152, 153, 166; Moynihan, *Paradise as a Garden,* pp. 106, 112, 125, 138, 143; Subhash Parihar, *Mughal Manuments,* pp. 11,14; Idem, *History and Architecture*, p. 193.

[169] Salih Kanbuh, *Bahar-i Sukhan,* fol. 121-22, cited by Abdul Rehman, 'Garden Types in Mughal Lahore', op. cit., p. 165.

[170] Tilloston, *The Rajput Palaces,* p. 193; Jan Pieper 'Hanging gardens in the Princely Capitals', op. cit., pp. 557-8.

[171] James Dickie, 'The Mughal Garden', op.cit., p. 130.

[172] Jahangir used to sit in his black marble throne over the water in the Shalamar Bagh of Kashmir. In the same manner emperor Shah Jahan's throne was built of white marble in the Shalamar garden of Lahore (Sylvia Crow et. al, pp. 98, 152; Moynihan, *Paradise as a Garden,* pp. 124, 143; James Dickie, 'The Mughal Garden', op.cit., p. 135; Muhammad Ishtiyaq Khan, op.cit.). A number of such types of marble thrones are placed across the water at Nishat bagh in Kashmir (Sylvia Crow et. al, pp. 116).

[173] Sikandar bin Manjhu, *Mirat-i Sikandari*, ed. S. C. Misra, (Baroda, 1961), pp. 139-40.

[174] Sylvia Crow et. al, p. 45.

fountains and around that pipe, brick was laid in lime mortal in order to protect the colaba line. There were separate concealed terra cotta pipes for the fountains installed in the center of the pool.[175] In the excavation of the Mughal garden at Wah, a terracotta pipe for supplying water to the fountains has been unearthed **(Plate: XXI).** Thus, numerous channels and terracotta pipes used to supply water to generate enough pressure for operating the fountains.[176] The hydraulic system at Wah garden explains the accelerated velocity of water for generating pressure. Excavation unearthed a channel constructed at a depth of about four feet from surface on the southern side of the garden. Calculations reveal that the 460 feet long drain had a three and a half (3 ½) feet slope. The uniform slope of the drain and the volume of the water were adequate to create sufficient momentum to operate the fountains. To operate fountains, a constant flow of water and pressure gradient creates as effective Siphon system. Furthermore, the terracotta pipeline containing the fountains was laid 38 inches below the general floor level of the channel. Starting from the main tank towards the west, 12 fountains were located at a distance of 7.6 feet from one another. Two more fountains have also been recorded on the second terrace. The water dropped down 8 feet from the elevation of the first terrace to the second terrace, thus generating enough pressure for fountains of the second terrace. It has been observed that the terracotta pipeline was composed of a series of small cylindrical pipes measuring nine inches in length and four and a half (4 ½) inches in diameter. Each pipe is tapered at one end whereas the other end is wider in which the tapered end was fitted. Indeed, the design and type of hydraulic technology was unique for the Mughal period.[177]

Usually the weak gravitational force provided low fountain and high provided high. In the heavy flow of water, as in Kashmir, there was a long row of the jets of water. These fountains were linked with each other by the underground glazed terra-cotta pipes for uniform supply of water and circular pits with spouts made of marble in the shape of lotus bud and sometimes metallic also as were found the remains in the excavations.[178]

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[175] Muhammad Ishtiyaq Khan, op.cit.; Neeru Mishra, *The Garden Tomb*, p. 96.
[176] Makin Khan, 'An Introduction to the Historical', op.cit., p. 463.
[177] Ibid., pp. 470-71.
[178] Kanwar, 'Origin and Evolution', op.cit,, p. 115; Mohammad Azher Ansari, 'Palace and Gardens of the Mughals', op.cit., p. 70; Salim Javed, 'Mahtab Bagh', op.cit, p. 1086; Villiers Stuart, *Gardens of the*, p.

Thus the pools, tanks and canals were full of fountain jets which played continuously in the canals and pools with whitened spray. The Shalamar garden of Lahore had 450 fountains and the pressure was so high that the water was thrown up in jets twelve feet high.[179] The glistening water shoots up almost four meters high and dropped back to a rippling pattern on the water surface. The returning jets of water from fountains created a delicate floral pattern on some pools.[180] A constant flow of water and pressure with slope creates a workable and effective siphon system to operate fountains effectively which was used in the gardens. The development of fountains to such an extent was based on the gravitational force with 'principle of siphoning'.

For all these hydraulic works a high level water management was needed. The hydraulic laws like 'Principle of Siphoning' and 'Application of Boyle's law' were working in the gardens. And, there was no lack of technical and experienced officials like the outstanding engineers Ali Mardan Khan, Mulla Alaul Mulk Tuni, Haidar Malik and Ustad Ahmad Mimar etc. who showed their talent. Thus, water played most important role in the Mughal gardens, whether as a pool, channel, *abshar* and fountain or to irrigate the flower and fruit beds. Jellico rightly observed that in Mughal gardens 'water' was perhaps even more important than 'soil'.[181] The use of water, as a central theme, is shared by Mughals and Italians at the same time, though in attitude quite different. The difference is described by Sylvia et. al. by saying, 'in Italian gardens, the water gushes from carved figure and flows into wrought basins but the intricate carving of the *chadar* in the Mughal garden is designed not to be seen itself but to give shape to the falling water'.[182]

145; Sylvia Crow et. al,, p. 136; Moynihan, *Paradise as a Garden*, p. 143; Indian Archaeological 1979-80- A review edited by Debala Mitra, Director General, *ASI*, (New Delhi, 1983), p. 74.

[179] *Tarikh-i Hasan*, pp. 297,299; *Aasar-us Sanadid*, p. 124; Sylvia Crow et. al, pp. 116, 152, 153, 160; Moynihan, *Paradise as a Garden*, p. 124.

[180] Ibid., pp. 142-43; Sadaf Fatma, 'Waterworks in Mughal Gardens', op.cit., pp. 1268-78.

[181] James Dickie, 'The Mughal Garden', op.cit., p. 130.

[181] Moynihan, *Paradise as a Garden*, pp. 112, 114, 124, 142, 147; Sylvia Crow et. al, pp. 44-45; Neeru Mishra, *The Garden Tomb*, p. 114; Also, Sadaf Fatma, 'Waterworks in Mughal Gardens', op.cit., pp. 1268-78.

[182] Sylvia Crow et. al, pp. 54-55.

Chapter: II

Role of Gardens in Urbanization, Management and Economy

The role of gardens in urbanization and the importance of urban centers in the development of gardens sheds light on economic and socio-cultural condition of the period. The urban elites and merchants laid out gardens which acted as stimulus in the development of urban centers. The co-relation of garden with the urbanization dates back to ancient period in India when the gardens formed a regular feature of the kings' palace complex and the individual houses of the pre-eminent courtesans.[1] In medieval India, the Muslim rulers stressed much on urbanization which reflects their policy of the consolidation of power. Besides the imperial and official buildings, they constructed the additional buildings of public utility, such as tanks, wells, *sarais*, *madrasa*, hospitals and gardens etc.[2]

The new era of urbanization was started under the Mughals with more stable, secure and prosperous environment for territorial expansion. Earlier works on Mughal cities, though extensive, are lacking in adequate study of gardens.[3] Recent studies, such as that of Stephen Blake focused on cultural character and urbanism of Mughal cities[4], while Wescoat who integrated the gardens, urbanism and urbanization but concentrated chiefly on the city of Lahore.[5] His studies disclosed that 'the relationship between Mughal cities and gardens were dynamic, changing over the course of Mughal rule and in relation to broader currents of cultural change. At times, gardens were the places to camp when attacking a city while at other times gardens were at the very heart of the citadel'.[6] In the urban centers of Agra, Fatehpur Sikri, Delhi, Lahore and Ahmadabad etc., gardens played more than a substantial role not only as the centers of social life and recreation but they adjusted in form, functions and meaning which transformed their surroundings. The large garden sites required many people for their regular maintenance, besides officials, like craftsmen, supervisors and gardeners. Wescoat informs that these people in Lahore generally settled and lived in communities near Baghbanpura, Begumpura and Shahdara

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[1] Daud Ali, 'Gardens in Early Indian Court Life', *Studies in History,* (2003), vol. 19, no. 2, pp. 221-252.
[2] Stephen Blake, *Shajahanabad,* pp. 2-3, 5, 7.
[3] Cf. Latif, *Lahore;* Archaeological Survey of India, *List of Muhammdan and Hindu Manuments in Delhi Zail,* 4vols, (Calculla, 1915-22).
[4] For details, see Stephen Blake, *Shahjahanabad.*
[5] See, Wescoat 'Gardens, Urbanisation, and Urbanism in Mughal Lahore: 1526-1657', in Wescoat, *Mughal Gardens: Sources places.*
[6] Wescoat, 'Gardens, Urbanisation', op.cit., p. 140.

near Shalamar. In this way gardens of Lahore, transformed the spatial development of already developed Lahore. These areas were dependent on the main town for their daily economic and commercial activities which consequently accelerated the process of urbanization.[7]

Gardens were laid out not only inside the city, but also outside the rampart and suburbs in cities like Shahjahanabad, Lahore, Agra, Ahmadabad and others. The gardens were generally built outside the cities, since one of their principal use was military and royal encampment. Increase in population necessitated the expansion of cities towards the garden areas in the suburb. Thus, gardens sketched a master plan for the development of urban centers. The territorial expansion by Akbar stimulated the construction of gardens in the urban centers after Babur. After annexation of Mandu (1564AD), Akbar ordered the construction of pleasant dwellings (*imarat-i dilkash*) and fruit gardens (*basatin)* in the periphery of Agra.[8] Accordingly the officers with the support of the trained workers laid-out gardens; thus Agra became so beautiful that it was like the cheek-mole (*khal-i rukhsar*) of the cities.[9] Likewise in 1571 AD, after returning from Ajmer, Akbar ordered to construct a new city Fatehpur Sikri and ordered that orchards *(basatins)* and the gardens *(baghat)* should be laid out in its 'periphery and center'.[10] Consequently, within a short period of time a large number of gardens were laid out in the vicinity.[11] *Chaharchaman* of Chandra Bhan Munshi, informed that in every city of each *suba* in Mughal India, many splendid buildings and comforting gardens were constructed.[12] Thus, gardens became an important component in the large urban settlement.

The basic feature of 'city foundations' and 'garden setting' were almost same, such as proper means of communication, good climate, healthy environment and abundance of water etc. Wherever the basic components were not fulfilled, the Mughals created artificial environment. The Riverfront scheme was initiated by Babur at Agra,

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[7] Abdul Rehman, 'Garden Types in Mughal Lahore', op.cit., p. 166.
[8] Abul Fazl, *Akbarnama,* ed., Agha Ahmad Ali and Abdu-r Rahim, (Calcutta, 1879), II, p. 236.
[9] Ibid., p. 237.
[10] Muhammad Arif Qandhari, *Tarikh-i Akbari*, Eng. tr., Tasneem Ahmad, (Delhi, 1993), p.185; *Akbarnama,* II, p. 365.
[11] Ibid.; Finch, *Early Travels,* p. 149.
[12] Chandra Bhan, *Chaharchaman,* p. 124.

then adapted by his successors at Lahore, and finally with a greater influence at Shahjahanabad (Delhi).[13] Almost comparable urban scheme was developed in the capitals of two other great Muslim empires: in Ottoman Istanbul, the royal and non-royal garden villas lined the Bosporus river and Safavid Isphahan where garden residences were built on the bank of the Zayanda river in the seventeenth century. [14] The practice of building gardens, just like building cities, on the river bank was not limited to the imperial gardens only but spread out to the gardens of other regions also. Most of the gardens in Mughal Ahmadabad (Gujarat) were situated on the bank of Sabarmati, of course, with the purpose of the easy access of water to the gardens.[15] A close relation between the royal palace and the suburb gardens shown in a Deccani painting, executed at Aurangabad, perhaps, of late seventeenth century, shows the distant waterfront lying with walled gardens and private pleasure grounds[16] **(Plate: XXII).**

The gardens built by nobles, elites and other rich persons especially in the *subas* of Mughal India have not received much attention as compared to the imperial gardens. The noble and great builders built their own gardens with running water and fountains.[17] However, the gardens were neither ubiquitous in areas of Mughal control nor were they entirely absent from the periphery.[18] These neglected gardens contributed a lot in the rich tradition of garden buildings, urbanization and economy. In almost all features, these gardens replicate the Imperial Mughal gardens. It has been rightly observed that mansions, gardens, mosques and shops in the sovereign city of Shahjahanbad copied the layout of buildings within the palace complex. Just like the palace complex became a model for the city, the city became the model for the provinces, districts and other subdivisions of the State.[19]

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[13] Ebba Koch, 'Mughal Palace Garden from Babur to Shah Jahan', op. cit, pp. 143-144; also see Stephen Blake, *Shahjahanabad.*
[14] Ebba Koch, 'The Mughal Waterfront gardens', op.cit, p. 143.
[15] For gardens in Mughal Gujarat, see Sadaf Fatma, 'Gardens in Mughal Gujarat', op.cit., pp. 441-452.
[16] Abdul Rehman, 'Garden Types in Mughal Lahore', op.cit., p. 166.
[17] Villiers Stuart, *Gardens of the Great,* pp. 28, 185.
[18] Wescoat, 'Mughal Gardens and Geographic Sciences, Then and Now', in Attilio Petruccioli, *Gardens in the Time of the Great Muslim,* p. 193.
[19] Stephen Blake, *Shahjahanabad,* pp. xii-xiii.

The gardens of princes, nobles, high ranking *mansabdars* and other social elites like merchants were the representation of imperial gardens in whole Mughal India. The suburb of all major towns was studded, like the suburb of the capital cities of Agra, Delhi and Lahore, by the gardens of nobles and social elites. Lahore has been known as the 'city of gardens' because besides imperial gardens, there were innumerable gardens built by the nobles on the banks of Ravi.[20] It is known as the 'city of gardens' since within its environs there were many verdant (*sar-sabz*) and flowery (*gulzar*) gardens.[21] Like Lahore, almost all the Mughal imperial cities and its river banks were threaded with gardens. Thus numerous gardens were located on the riverbank of Jamuna at Akbarabad (Agra).[22] Just to shelter themselves in the harsh summers, the rich men of town built many summer houses and planted gardens.[23] The Gujarat nobles laid out uncountable gardens like Shahi Bagh, Shah Bari, Fateh Bari, Jeet Bari, Rustam Bari, Nagina Bagh, Tut Bagh, Shaban Bagh, gardens of Azam Khan, Amin Khan, Mehar Khan and Bagh-i Jahanara etc.[24] Interestingly, Ahmadabad was also called the 'city of gardens' like Lahore. The reason of this innumerability of gardens at Ahmadabad was, probably, its hot weather, since Jahangir called it as '*Jahannamabad'* just because of its hot climate.[25] Ali Mohammad Khan reports that 'from the gate of Shahi Bagh to Hajipur (at Ahmadabad), the road on both sides is shaded by tall green trees beyond which lie the beautiful gardens of the *nazims* and nobles. The whole scene appeared as a dream in emerald.'[26] Jahangir admired Fateh Bagh, laid-out by Abdur Rahim Khan-i-Khana at Sarkhej on the bank of

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[20] S. Mubin, I.A. Gilani, et,al., 'Mughal Gardens In The City Of Lahore – A Case Study Of Shalimar Garden' in *Pakistan Journal of Science*, Vol. 65 No. 4, (December, 2013), p. 512.

[21] Chandra Bhan, *Chaharchaman,* pp. 131-32.

[22] Ibid., pp. 128-29.

[23] Alexander Hamilton, *A New Account of the East-Indies, from the Year 1688 to 1723,* ed. W. Foster, (London, 1930), I, pp. 145-46.

[24] *Tuzuk*, pp. 208, 211, 212, 214, 215, 231, 241; *Mirat* (Suppl), pp. 18-23; I, pp. 154-55, 192, 195-96, 319, 332, 346-47, 388; II, pp. 47, 62, 67, 77, 86, 133, 157-58, 164, 237-38, 272-73; *Mirat-ul Haqaiq*, ff. 160a, 233a, 245a, 247a, 291a, 296 a,b, 310 b, 340a, 345b, 371a, 374b, 375b, 391b, 546a, 369a; *MS Blocket*, Suppl. Pers. 402, BN, a collection of contemporary documents mostly concerning surat, rotograph is available at the CAS, Department of History, AMU, ff. 174(b)-175a; Hamilton, I, P. 145; Jean de Thevenot, *The Indian Travels of Thevenot and Carari*, ed. Surendranath Sen (New Delhi, 1949), pp. 14-15, 35-36; Mandelslo, *Mandelslo's travel in Western India,* ed. M.S. Commissariat (bombay, 1932), p. 47; Manucci, II, p. 208; John Fryer, *A New Account of East India and Persia being Nine Years Travels, 1967-81,* (New Delhi, 1985), p. 104; *Corpus inscriuptionum Bhavnagri*, reprint, (New Delhi, 1971), pp. 45-46; Burgess, *Mohammadan Architecture*, (New Delhi, 1997), II, p. 57; Also, Sadaf Fatma 'Gardens in Mughal Gujarat', op.cit., pp. 441-52; Idem, 'Constructional Activity, op.cit., pp. 232-37.

[25] *Tuzuk*, p. 231 ; Sadaf Fatma. 'Constructional Activity', op.cit., p. 234.

[26] *Mirat* (Suppl), p. 22.

the river Sabarmati, that there was no garden like this in whole of Gujarat.[27] However, Mandelslo was confused in distinguishing Fateh Bagh with Jeet bagh which was built by Saif Khan, *subedar* under Jahangir.[28] *Masir-ul Umara* located a garden near Lucknow, though no other sources give information about the gardens in and around Lucknow, constructed by Mohammad Ashraf, brother of Mutamid Khan (author of *Iqbalnama-i Jahangiri*), during the reign of Shah Jahan which was a public resort.[29]

In the *Suba of* Bihar and Bengal, after the annexation by Mughals, references speak of so many gardens of nobles at Patna, Hajipur, Maner, Rohtas, Munger, and Dhaka etc. but in a very sketchy manner.[30] Undoubtedly, they were beautiful as Hasan Askari reads the chronogram of *Bagh-i-Jafar*, built by Nawab Jafar Khan, governor of Bihar under Shah Jahan, 'this garden has added the grandeur to Patna (*raunaq-i Patna)*.[31] The garden of Shah Shuja, again a governor under Shah Jahan, was constructed on elevated level near Hajipur (Vaishali).[32] The Mughal governor Ibrahim Khan (17th century) built an extensive garden at Maner (30 kms from Patna) adjacent to the shrine of a Firdausi Sufi saint Shah Daulat.[33] The coastal city Dhaka, earlier a small Hindu trading town, emerged as eastern most regional capital of Mughals by 1610 AD, had been dotted with so many gardens as the names of the localities such as Lalbagh, Shahbagh and Paribagh etc. suggest.[34] Mughal officials enclosed the old fort and Lal Bagh fort with Mughal gardens. Lal Bagh Fort was built basically on the pattern of Mughal

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[27] *Tuzuk*, p. 214; *Mirat*, I. pp. 154-55; (Suppl), p. 22; Mandelslo, p. 47; Sadaf Fatma. 'Constructional Activity', op.cit., p. 234; *Idem*, 'Gardens in Mughal Gujarat', op.cit., p. 442.

[28] Cf. *Mirat* (Suppl), p. 23; Mandelslo, p. 44. Fateh Bagh was built by Abdur Rahim Khan-i Khanan's victory over Muzaffar III, on the bank of Sabarmati near Sarkhez. Whereas, Jeet Bagh was laid out by Saif Khan to commemorate the victory over Abdullah Khan Firozjung, on the opposite side of the bank of Sabarmati river where Fateh Bagh was. And Mandelslo became highly confused perhaps because of the nomenclature '*fateh'* and '*jeet'* for 'victory'. But *Mirat* separately furnishes the account of Jeet Bagh.

[29] Shah Nawaz Khan, *Masir-ul Umara*, ed., Abdur Rahim and Ashraf Ali, (Calcutta, 1888), III, p. 434.

[30] Qeyamuddin Ahmad, *Corpus of Arabic & Persian Inscriptions of Bihar (A.H.640-1200)*, (Patna, 1973), pp. 178-179, 229, 235-238, 287-290; Imtiaz Ahmad, 'The Mughal Governors of Bihar and their Public Works', *PIHC*, (Aligarh, 1999), pp. 383-392; Syed Hasan Askari, 'The City of Patna-Etymology of Place Names', in Qeyamuddin Ahmad, ed., *Patna Through the Ages*, (New Delhi, 1998), pp. 59-67; Idem, *Medieval Bihar: Sultanate and Mughal Period*, (Patna, 1990), pp. 142-143, 160-64; Khondkar, *The Provinces of Bihar and Bengal under Shah Jahan*, (Dacca,1974), pp. 203-206.

[31] Askari, 'The City of Patna, op cit., p. 60.

[32] Askari, *Medieval Bihar*, p. 163.

[33] *Outlook Traveller Magazine*, September 09, 2013, downloaded on 12/09/2014, from http://www.archive.outlooktraveller.com/printarticle.aspx?287536, p. 1/9.

[34] Farida Nilufar, 'Gardens, Parks and Open Spaces in Capital Dhaka: Mughal Period', https://buet.academia.edu/DrFaridaNilufar, p. 1.

Chaharbagh.[35] They also built Hazaribagh, Qazirbagh, Bagh-i Chand Khan, Bagh-i Hosainuddin, Bagh-i Musa Khan, Aram Bagh, Raja Bagh, Mali Bagh for festivities, reception and recreation.[36] However, except the palace fortress of Lal Bagh, Mughals preferred to live in open structured garden because of the wet climate of Dhaka.[37] Bagh-i Badshahi was the famous Mughal garden at Jahangirnagar (the then Dhaka) though not a much planned garden unlike other enclosed Mughal gardens.

In Kashmir, there were innumerable gardens. The author of *Tarikh-i Hasan* listed 61 gardens of Mughal period with exclusive remarks that these were some famous gardens mentioned in the *masnavis* of the poets of Kashmir like Qudsi, Kalim, Salim, Zafar Khan, Khasala, Mir Ilahi and Bahishti.[38] Thus, besides Imperial gardens, such as the garden of Nasim, Shalamar, Nishat, Chashma Shahi, Pari Mahal, Achabal and Vernag, there were so many other gardens built by the nobles in Kashmir. In fact these gardens (listed above) constitute only a tip of an iceberg of the numerous gardens built by the Mughals in Kashmir.[39] By the time of the visit of Bernier, in most of the houses along the banks of the river Jhelam and in the city Srinagar, there were gardens which produced very pretty effects.[40] Climate and gushing of water enforced Mughals to shift the garden building activity from plains of Agra, Delhi and Lahore to the mountainous terrain. This tradition of geographic shifting and making gardens reminds Babur's building of *chaharbagh* in the new environs of Hindustan.

Besides the gardens of Mughal officials, the evidence shows the garden building activity by the social elites, especially by the merchants, on the same pattern. Again a heterogeneous example comes from Gujarat where the gardens, at the time of the Mughals, can be classified into four categories: (i) the Imperial gardens (ii) gardens built by the nobles (iii) gardens of the Indian merchants and (iv) gardens constructed by the English and the Dutch. Thus, in addition to Mughal nobility, there were other rich

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[35] Catherine, *Architecture of Mughal*, pp. 284-85.
[36] M.S. Hossain, 'Strategies to integrate the Mughal settlements in Old Dhaka', *Frontiers of Architectural Research,* (2013), 2, P.424, Available online at www.sciencedirect.com, p. 424.
[37] Farida Nilufar, 'Gardens, Parks and Open, p. 9.
[38] *Tarikh-i Hasan,* pp. 293-32.
[39] Haenraets, *Mughal Garden of Kashmir,* p. 21.
[40] Bernier, p. 398.

persons, actively involved in garden buildings. Since these gardens are ruined, we lack references about the architectural features of these gardens. A garden built by a merchant Mulla Abdul Ghafur at Surat was termed '*bagh-i-bemisl'* (incomparable garden) by the author of *Mirat-ul Haqaiq.*[41] We may assume from the reference that the garden was built on the pattern of imperial gardens. The same garden had later been converted into funerary garden, just like that of Mughals. In 1733 AD Mulla Mohammad Ali, grandson of Abdul Ghafur, was buried in this garden near the graves of his ancestors.[42] A *farman* issued by Shah Jahan (dated 1642 AD), to the *hukkam, ummal* and *mutasaddis* of the ports, informs that there was a garden of Shanti Das Zaveri, the jeweler, at Ahmadabad. The *farman* further instructs that no one, whether he be *sahib-i Suba* or *diwan* or *bakhshi* or any other officials, should ever interfere in the property, especially *havelis,* shops and gardens of the jeweler Shanti Das Zaveri.[43] It also indicates the political influence of the merchants. Besides, there were the gardens of the merchants like Rustam Manak Parsi, Kissendas and Ahmad Chellaby which were used even by the other dignitaries at the time of need.[44] Ashin Das Gupta describes the well laidout gardens in the city of Surat built both by Hindu and Muslim affluent merchants which include the stone mansions of the Mughal gardens, brick built dwelling of the wealthier merchants and pleasant gardens in suburbs. There were also numerous well laid-out gardens, within the city wall, built by the rich men of the city.[45] The late 19th century gardens built by merchants at Salarpur, near Banaras, to the North of the river Varuna, constitute several features of Mughal gardens such as the boundary wall, the central platform, the residential buildings and wells outside the walls. However one may notice the absence of *khiyaban* in these gardens.[46]

The English and the Dutch merchants laid out so many gardens with some characteristics of the Mughal gardens. Contemporary travelers visited these gardens of

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[41] *Mirat-ul Haqaiq,* ff. 294b, 295b, 318b, 326a, 346b.
[42] Ashin Das Gupta, *Merchants and the Decline of Surat,* 1700-50, (New Delhi, 1994), p. 236.
[43] SAI Tirmizi, *Mughal Documents 1628-1659,* II, (New Delhi, 1995), p. 71.
[44] *Mirat-ul Haqaiq,* ff 298 a, 308 b, 310 a; Ashin Das Gupta, *Merchants and the Decline*, p. 32.
[45]Ibid., pp. 32-33.
[46] Rotzer and Deokar, 'Mughal Gardens' op.cit., pp. 144,165.

English and Dutch from time to time and furnished beautiful descriptions.[47] Their gardens, situated in the periphery of Surat, displayed four long walks which made cross in the middle of the garden with a *chhatri* (pavilion), pretty rooms, tanks, fruits and flower beds.[48] Pietro Della Valle was carried by the Dutch commander in his coach a little out of the city to see the 'one of the fairest gardens of Surat'. The garden had the resemblance of Mughal gardens as described by the Italian traveler, after seeing their gardens, that the Dutch commander and the English president were living in the manner of the Mughals of India.[49] One of the Dutch gardens was visited by Travernier in 1652 AD at Masulipatam where he was entertained at night.[50] There were many gardens, on the coast of the South of Cochin and also on some of the picturesque Island, built by the Dutch governor and other rich people.[51]

The mansions of *umaras* and merchants in Agra were surrounded by gardens displaying the appearance of old castles buried in the forests.[52] Besides imperial gardens, Ebba Koch has mapped the gardens build by the nobles (*umaras*) and merchants on the both sides of the river Jamuna. [53] The Mughal *zamindars* and other land holders had also shown interest in building gardens.[54] A mango orchard was laid out, in 1674-75 AD, by two *muqaddams* (headmen) in the periphery of Allahabad.[55] It indicates joint venture of garden making. The regional rulers, even in later period, also followed the Mughal pattern in laying out of their new gardens.[56]

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[47] Hamilton, I, p. 145; Finch, *Early Travels*, p. 135; Mandelslo, p.5; W. Foster, (ed.), *The Voyage of Thomas Best to East Indies, 1615-19*, (London, (1934), p. 209; John Fryer, pp. 40, 104; Peter Mundy, *Travels in Asia, 1630-34*, ed., Sir R.C. Temple, (London, 1914), II, pp. 25-26; Pietro Della Valle, *The Travels of Pietro Della, Valle in India,* tr. G. Havers, ed., Edward Grey, (London, 1991-92), I, pp. 39-40; William Foster, (ed). *The English Factories in India,(1655-60)*, (Oxford, 1906-27), (*EFI* henceforth), pp. 141, 197; J. Ovington, *A voyage to Surat in the year 1689*, ed. H.G. Rawlinson, Reprint, (London, 1929), pp.130, 232.

[48] Peter Mundy, II, pp. 25-26; Fryer, p. 40; Pietro Della Valle, I, pp. 39-41; *EFI, 1655-1660,* pp. 141, 197; Ovington, pp.130, 232; Mandelslo, p. 5.

[49] Pietro Della Valle, I, pp. 39-41.

[50] Travernier, *Travels in India, 1640-47*, tr. V. Ball, ed. by W. Crooke, (London, 1925), I, p. 207.

[51] K.P. Padmabha, *History of Kerala: Written in the Form of Notes on Visscher's Letters from Malabar*, (Madras, 1989), p. 212.

[52] Bernier, p. 285.

[53] Ebba Koch, *The Complete Taj Mahal,* pp. 30-31, 37-79.

[54] M.A. Ansari, *Administrative documents of Mughal India,* (Delhi, 1984), p. 7.

[55] Irfan Habib, *Agrarian System,* p, 54 n.

[56] *Jaipur Karkhana Jamakharch Baghayat,* List No (Fard.)88, 1830AD (1887VS), pp. 27-29; Also see, Farhat Kamal, *Urban Morphology of Eighteenth Century Jaipur,* Mphil dissertation, (2011), p. 91.

Since gardens contributed in the process of urbanization, inevitably the gardens became the center of economic activities. Stephen Blake writes that the ring of gardens, tombs and *bazars* contained a good deal of economic and social activity of the city.[57] It is important to discuss the economic role of the gardens such as the level of expenditure on the constructions and maintenance of the gardens, and the State patronages to them.

Undoubtedly gardens in Mughal India, specifically Mughal gardens, demanded a very high expenditure both in the laying-out as well as in maintenance. Contemporary historians are silent on the annual income or expenditure. Regarding the expenditure, Irfan Habib rightly points out that one may assume the expenditure of these gardens by certain data on animals, wells and staff.[58] Emperor Jahangir visited the Nurmanzil garden (also known as Zahra Bagh) in the Southwest of Agra and saw that in the main well of the garden 32 pairs of oxen were employed to draw water.[59] However, *Bayaz-i Khushbui* written around 1642 AD, gives information of the presence of about 200 sanctioned but 62 actual oxen in the same garden.[60] In the garden of Moti Mahal at Agra, there were 120 sanctioned oxen but 3 (?) actual.[61] For the drawing of water for irrigation in Shahi Bagh at the time of Jahangir's visit; in Shah Bari during the viceroyalty of Mubariz-ul-Mulk; and in Nagina Bagh during the viceroyalty of Nizam-ul-Mulk of Mughal Gujarat, there were eleven wells and 100 pairs of oxen; four pairs of horses; and two pairs of oxen respectively.[62] In the Bagh-i Jahanara of Agra there were 60 oxen, fetching the water from three wells.[63] As far as wells in the gardens are concerned, we have myriad references of the wells in innumerable gardens, not only in that of the Mughals but in the others too. Irony of the fact is that our contemporary accounts almost omit any direct information about the gardeners in particular and staff in general, who were the main souls for the verdant and luxurious gardens. Valuable information comes from *Bayaz-i*

[57]Stephen Blake, *Shahjahanabad*, p. 57.
[58] Irfan Habib, 'Notes on Economic', op. cit., p. 132.
[59] *Tuzuk*, p. 264.
[60] *Bayaz-i Khushbui*, Ms., IOL, Ethe, (Rotograph copy of the manuscript is available at the CAS, Department of History, AMU), ff. 109 b-110b.
[61] Ibid.
[62] *Mirat* (suppl.), pp. 19, 20, *Mirat-ul Haqaiq*, ff. 159b, 173a; *Tuzuk*, pp. 208, 15; Pietro Della Valle, I, p. 102; Thevenot, p. 11. Nagina Bagh was laid-out by Sultan Qutubuddin, the grandson of Sultan Ahmad, the founder of Ahmadabad. It was in the middle of the Kankariya tank built by the same Sultan. Shah Bari was built by one of the sultans.
[63] *Bayaz-i Khushbui*, ff. 109 b-110b; See also, Irfan Habib, 'Notes on Economic', op. cit., p. 133.

Khushbui that the standard ratio was one gardener (*baghban*) for one *bigha* and one ox (*kau)* to half *bigha.*[64] In the Moti Mahal Bagh there were 120 sanctioned gardeners but 3 *khasa (*actual? Or regular?), in Bagh-i-Jahanara, 60 ordinary and 56 *khasa* and in Bagh Dahra (Nur Manzil garden) there were 300 sanctioned but 236 actual.[65] This disparity between the actual and sanctioned number of animals and gardeners may be because of the huge expenditure; thus it was not possible to maintain the sanctioned number. Apart from 20 gardeners there were 14 men to draw water from the well (*chah*) in Bagh Nur Sara at Agra.[66] In the Shahi bagh of Ahmadabad there were 70 gardeners, 7 guards and sweepers.[67] Besides supervisors, the other staffs included were superintendent, accountant and treasurer.[68] In Shah Bari and Nagina Bagh of Ahmadabad, there were eight gardeners and four gardeners respectively.[69] In Shalamar Garden of Lahore, 128 *malis* were working at that time.[70]

The huge expenditure on the gardens may be gauged from the areas of land allotted to the gardens. Nurmanzil garden was built in 330 *Jaribs (bighas),* according to *ghaz-i Ilahi*[71]*,* Moti Mahal garden in 170 *bighas*, Bagh-i-Jahanra in 56 *bighas* and Bagh Nur Sara in 64 *bighas Jahangiri.*[72] Shalamar Bagh of Lahore covered around 100 *bighas.*[73] Shahi Bagh, Fateh Bagh and Rustam Bagh of Mughal Gujarat contained the land of 105 *bighas* 3 *biswas,* 120 *bighas* and 60 *bighas* respectively.[74] Garden of Muqarrab Khan at Kairana (Saharanpur) was built in 140 *bighas* of land.[75] A *farman* of Akbar, preserved in the National Archives of India, points out that 75 *bighas* of land was granted for laying out a garden, in 1579 AD to the village of Jaudanpur in *pargana* Jhalu,

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[64] *Bayaz-i Khushbui*, f. 110a.
[65] Ibid.,ff. 109b-110a; See also, Irfan Habib, 'Notes on Economic', op. cit., p. 133.
[66] Ibid., f.110b; Ibid.
[67] *Mirat* (suppl.), p. 23.
[68] Ibid., p. 184.
[69] Ibid., pp. 19, 20.
[70] Ihsan H. Nadim, *Grdens of Mughal Lahore*, *(*Lahore, 2005*)*, p. 44.
[71] *Tuzuk,* p. 264.
[72] *Bayaz-i Khushbui*, ff. 109b-110b.
[73] W. Moorcraft and George Trebeck, *Travels in India and Himalay Provinces of Hindustan and the Punjab in Ladakh & Kashmir in Peshawar, Kabul, Hundur and Bokhara-1819-1825,* (New Delhi, 2000), p. 91; Ihsan H. Nadim, *Grdens of Mughal Lahore*, p. 44.
[74] *Tuzuk*, pp. 211, 214 ; *Mirat* (suppl), pp. 21-22; I, pp. 154-55, 195-96.
[75] Ibid., I, p. 283; *Masir-ul Umara*, III (i), p. 381.

sarkar Sambhal.[76] The Mughal documents, *farman, nishan, parwana, chaknama, bainama,* and *shuqqa* preserved in National Archives India (New Delhi), furnish information related to the allotment of land and money to lay-out the gardens to the officials and even to the religious persons.[77] The vastness of the gardens, sometimes, confused the travelers who exaggerated the area in their approximation. Finch describes the area of Aam Khas Bagh of Sirhind as at least two *kos* long and equally broad,[78] but survey determined the total length of the garden around 864 meter only.[79]

As for the money allotted for the laying out of gardens, Abdul Hamid Lahori informs us that six lakh rupees were spent in laying out of the Shalamar gardens of Lahore, in addition, two lakh rupees more were given from the State exchequer, in two instalments, for constructing Shahnahar, built to irrigate the garden.[80] The author of *Masir-ul Umara* corresponded the amount given by Abdul Hamid Lahori and informs that Shalamar was completed at a cost of 8 lakh rupees under the superintendentship of Khalilullah K. Hasan.[81] Evidently, *Masir-ul Umara* included the cost of the canal (Shahnahar) also, which was 2 lakh rupees. Harvan canal was laid out during the reign of Jahangir, at the sum of Rs. 30,000 to water the Nur Afza garden at Srinagar.[82] Shahnawaz Khan, the author of *Masir-ul Umara* further computes that the cost of Hayat Bakhsh garden of Red Fort (Delhi) was rupees 28 lakhs, while the whole fort was built in 60 lakh rupees.[83] When Jahangir visited the garden of Nurmanzil at Agra a sum of Rs. 150, 000 was already spent and it was expected to reach Rs. 200,000 by its completion.[84] Nearly same amount (rupees 200,000) has been spent in construction of the Fateh Bagh at Ahmadabad.[85]

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[76] Accession No. 2122, National Archives of India, New Delhi (henceforth NAI), (Vide CAD, I, S. No. 26).
[77] Accession Nos. 6, 15, 303, 1341, 1389, 1393, 1407, 1475, 1651, 1705, 1836, 2122, 2125, 2136, 2166, 2323, 2383/5, 2671/16, 2671/17, 2691/9, 2712/1, NAI, New Delhi; See also Tirmizi, *Mughal Documents*, II, pp. 50, 64, 112.
[78] Finch, *Early Travels,* p. 158.
[79] Cf. Subhash Parihar, *History and Architecture,* p. 203.
[80] Lahori, *Padshahnama,* II (i), p. 315; Salih Kambuh, *Amal-i Salih,* II, pp. 238-39, 288; Inayat Khan, *Shahjahanama of Inayat Khan,* ed. & tr., W.E. Begly & Z.A. Desai, (N. Delhi, 1990), pp. 262, 298.
[81] *Masir-ul Umara,* II, pp. 825.
[82] *Tuzuk,* p. 347.
[83] *Masir-ul Umara,* III, (i), p. 465.
[84] *Tuzuk,* p. 264.
[85] Ibid., p. 214.

References reveal that the amount maintained was spent not exclusively on gardens but jointly on other buildings too. Ali Mardan Khan built lofty houses and pleasant gardens at Sodhra (Punjab) at the cost of Rs. 6 lakhs which rivaled the gardens of Shalamar.[86] Nine lakh Rupees were spent on Naulakha garden, including the buildings of prince Kamran at Lahore and the place got the nomenclature of Naulakha on account of the amount expended in its construction.[87] It is said that Asaf Khan spent an enormous sum of 20 lakh rupees on mansions and gardens at Lahore. Besides, a vast amount of money was spent by him on the houses and gardens which he had constructed at Agra, Kashmir and at other places.[88] It has been computed by the author of *Dasturul-Amal* that in a single year Shah Jahan spent eight lakh rupees on the buildings and gardens.[89] A glimpse of expenditure on the construction of gardens may be gauged from the table prepared on the basis of contemporary sources:

Table showing areas, expenditure, men and animals involved in the gardens

S. No	Garden	Place/ State	Expenditure (in cash)	Garden's area (in *bighas*)	Oxen attached	Worker/officials	Wells
01	Nur Manzil garden, also known as Zahra Bagh	Agra (U.P.)	Rs. 200,000	330 *bigha-i Ilahi* = 495 *bigha-i daftari* (Shah Jahan's time)	64 Oxen but another source says: 200 (sanctioned) 62 (actual)	300 gardeners (sanctioned) 236 (actual)	——
02	Moti Mahal Garden	Agra (U.P.)	———	170 *bighas*	120 (sanctioned) 3 ? (actual)	120 gardeners (sanctioned) 3 *khasa* (regular?) 13 (actual)	4
03	Bagh-i Jahanara	Agra (U.P.)	———	56 *bighas*	60 oxen	60 gardeners (ordinary) 56 (*khasa)*	3
04	Bagh-i Nur Sara	Agra (U.P.)	———	64*bighas (Jahangiri)*	———	20 gardeners 14 men to draw water	6

[86] Sujan Rai Bhandari, *Khulasat-ut Tawarikh*, op.cit., p. 98. In the reign of the emperor Shah Jahan, Ali Mardan Khan founded a city near Sodhra village in Punjab and gave it the name Ibrahimabad after his son.
[87] Latif, *Lahore*, p. 157.
[88] Inayat Khan, *Shahjahanama,* p. 282.
[89] *Dasturul-Amal-i Shahjahani,* f. 18, Sulaiman Collection 675/53, Maulana Azad Library, AMU, Aligarh. Also see Lahori, *Padshahnama*, II (ii), pp. 713-14.

05	Shahi Bagh	Ahmadabad (Gujarat)	———	105 *bighas*, 3 *biswas*	200 Oxen	70 gardeners 7, guards&sweepers,1 suprintendent,1 accountant,1 treasurer besides supervisors	11
06	Shah Bari	Ahmadabad (Gujarat)	———	62 *bighas* (inside) 50 *bighas* (outside)	8 Oxen	8 gardeners and sweepers	——
07	Nagina Bagh	Ahmadabad (Gujarat)	———	------	4 Oxen	4 gardeners	——
08	Rustam Bagh	Ahmadabad (Gujarat)	———	60 *bighas*	———	———	6
09	Fateh Bagh	Ahmadabad (Gujarat)	Rs.200,000	120 *bighas*	———	———	——
10	Garden of Muqarrab Khan	Kairana, (Saharanpur U.P.)	———	140 *bighas*	———	———	——
11	Shalamar Garden	Lahore (Punjab)	Rs.600,000 (garden) +200,000 (canal)	100 *bighas*	———	128 gardeners	——
12	Aam Khas Bagh	Sirhind (Punjab)	———	2 *kos*	———	———	——
13	Garden of Ali Mardan Khan with buildings	Punjab	Rs,600,000	———	———	———	——
14	Naulakha Bagh with buildings	Lahore (Punjab)	Rs.900,000	———	———	———	——
15	Gardens and mansions of Asaf Khan	Lahore (Punjab)	Rs.20,00, 000	———	———	———	——
16	Bagh of Jaudanpur	*sarkar* Sambhal (U.P.)	———	75 *bighas*	———	———	——
17	Bagh of Nalun, Jalali	*Sarkar* Kol (Aligarh, U.P.)	———	10 *bighas*	———	———	——
18	Gardens of Mahtawana	*Pargana* Sandila (U.P.)	———	4 *bighas*,5 *biswas* 8 *bighas* 10 *bighas* 30 *bighas* 17 *bighas*	———	———	——
19	Bagh	Gorakhpur (U.P.)	———	4 *bighas*	———	———	——
20	Bagh	Chanwar, (Akbarabad)	———	29 *bighas* and 19 *biswas*	———	———	——
21	Bagh	Brindaban (U.P.)	———	5 *bighas* 135 *bighas*	———	———	——
22	Bagh	Khamirpur n Sahibabad (Kol, U.P.)	———	12 *bighas*	———	———	——

23	Bagh	Tappa (Kol, U.P.)	———	12 *bighas*	———	———	——

(**Sources:** *Tuzuk; Mirat; Padshahnama; Amal-i Salih; Shahjahanama; Khulasat-ut Tawarik; Masir-ul Umara; Mirat-ul Haqaiq; Bayaz-i Khushbui; Dasturul-Amal-i Shahjahani; Documents, NAI; Tirmizi; Early Travels; Pietro Della Valle; Thevenot; Moorcraft; Irfan Habib, Ihsan H. Nadim; Subhash Parihar; Latif*)

Besides the constructional expenditure, the maintenance expenditure was enormous too. The Mughal emperors issued orders for the maintenance of old gardens and even inflicted punishments to the careless officials. Akbar deputed Mutamid Khan to construct the garden of the Fort of Nagar Nagar on the slope of Hari Prabhat hill which he named '*Bagh-i Nur Afza'*.[90] Jahangir appointed Khwaja Waisi, the *karori* of Sirhind and ordered the removal of old trees and plantation of new ones. Jahangir further directed Khwaja for the cleaning of aqueduct (*uraqqbandi)*[91] and repairing of old buildings.[92] The author of *Waqiat-i Kashmir* provides information that Shah Jahan spent few months (in the year 1639-40 AD) in cleaning and repairing the old gardens of Kashmir, especially Shalamar garden.[93] Salih Kambuh gives a detailed description about the expenditure on renovation of the existing buildings and gardens by Shah Jahan that 'he spent two and half crore on the royal palaces, mosques, gardens and forts of different cities'.[94] Although Aurangzeb was least interested in laying out of gardens, yet he was very much concerned about the repair and maintenance of the existing gardens, thus spending a huge amount on that. An order was issued to the *nazim* of the *suba* of Gujarat (1683AD) that 'since Amin Khan laid out the garden with great trouble and planted various fruit bearing trees, efforts should be made to increase their freshness (*tararat)* and verdancy (*tarawat*)'. The emperor further demanded the complete map of the garden with details about the area of buildings, number of trees income as well as expenditure.[95] The garden of Kankariya tank

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[90] *Tuzuk*, Eng. tr., Alexander Rogers, reprint, (Delhi, 2006), I, p. 151. Also see, G.M.D. Sufi, *Kashir*, p. 248.
[91] Roger, the first translator of *Tuzuk*, is not certain about the meaning of *uraqbandi*. Infact he read the word as '*iraqbandi'*. According to him, perhaps the meaning of the word is 'footpath'. However, the meaning of the word is 'aqueduct'. (*Tuzuk*, p. 283; Eng tr., II, p.113 note).
[92] Ibid.; Also see, Subash Parihar, *History and Architecture*, p. 190; Idem, *Mughal Manuments*, p. 10.
[93] *Waqiat-i Kashmir*, p. 225.
[94] Salih Kambuh, *Amal-i Salih*, II, p. 427.
[95] *Mirat*, I, p. 305.

was repaired at the cost of rupees 4254.[96] Manucci has vaguely mentioned that nearly one crore was spent on the cultivation of flowers and extraction of scents by the Mughals.[97]

A royal order was issued by Aurangzeb in 1695 AD to maintain and increase the verdancy of the produce of roses when he received the information that the crops of rose had been affected due to old tamarind and pipal trees of Shahi Bagh and Gulab Bagh of Ahmadabad.[98] Aurangzeb advised to his son, through a letter from Deccan, to go to the gardens of Shahjahanabad once a day, and engage in repairing the buildings of the forts and gardens. The emperor further directed him for immediate reporting about actual condition of the gardens of his sisters as well as of other old gardens with minute details of trees and plants, so that the State issued the needed amount for the repairing of the damaged buildings.[99] In 1710-11 AD, even after Aurangzeb, the *diwan* of Gujarat received an order to repair (*marammat)* the gardens of Shahi Bagh, Kankariya garden, Rustam Bagh and Gulabi Bagh of Ahmadabad at an estimate of rupees 23,480.[100] In the light of the supra evidences, Pelsaert's statement stands self-contradictory that the Mughals built the gardens, tombs and palaces by spending huge amounts, so many hundreds of thousands, and maintained them only during their lifetimes, yet keep them in repair only so long as the owner live and have the means. Once the builder dead, no one care for their maintenance; the son neglect their father's work, the mother her son's, brothers and friends took no care for each other's buildings; everyone tries, as far as possible, to erect a new building of his own and busy in establishing the reputation on the line of their ancestors.[101] Even as late as in 1712 AD, at the time of Farrukh Siyar, a *yaddasht* was executed under the seal of Nelan, an official of Maharaja Jai Singh to Gosain Jagan Nath of *qasba* Mathura which directs him to maintain and protect the garden and *haveli* assigned to him. It is said in the *yaddasht* that he should repair and protect the garden properly and he should endeavor hard to make it more prosperous and thereby enhance the revenue[102](**Document: II).** It may be concluded that the highest

[96] Ibid., p. 328.
[97] Manucci, II, pp. 315, 316.
[98] *Mirat,* I, pp. 337-38.
[99] Aurangzeb, *Ruqqat-i Alamgiri* or *Letters of Aurangzeb*, Eng. tr., J.H. Bilimoria, (N. Delhi, 1972), p. 116.
[100] *Mirat*, I, p. 388.
[101] Pelsaert, p. 56.
[102] Accession No. 2691/a, NAI , New Delhi, (Vide CAD, III, S. No. 171).

amount was spent on maintenance, either on account of their importance or their bad conditions due to negligence in the intervening period.

For an effective maintenance of the gardens, severe punishments were prescribed for cutting of trees or destroying flower plants. During his visit to Fateh Bagh of Abdur Rahim Khan-i-Khanan, Emperor Jahangir was reported that due to enmity, a servant of Muqarrab Khan had cut down the trees of champa. The emperor personally enquired (*tahqiq*) the matter and after getting confirmation, he ordered both of his thumbs to be cut off as a warning to others so that they could take a lesson (*ibrat*).[103] Even the influential noble like Abdullah Khan Firozjung, former viceroy of Gujarat, could not escape the punishment when he damaged trees of the garden of Nizamuddin, former *bakhshi* and historian of *Tabaqat-i Akbari,* on account of his dispute with the son of the historian. Jahangir in *Tuzuk* confessed that this news shocked his sense of justice. Thus, he ordered the reduction of *jagir,* prior given to Abdullah Khan.[104] Almost same incident happened at the time of Aurangzeb in the garden of Amin Khan at Ahmadabad. An order was issued that a bond should be taken from the culprit to not to commit the same in the future and the owner had to be paid the price of the trees.[105] Once the gardens of Shahi Bagh and Gulab Bagh at Ahmadabad produced less, the matter was reported to the emperor Jahangir, who, in turn, ordered the *diwan-i Suba* to inquire and take steps to increase the produce of gardens; he was instructed that if the garden had been found barren, the *darogha* should be punished for that.[106] It further indicates that the *darogha* of the gardens also acted as in charge or keeper of the gardens.

However, the expenditure on gardens was so huge that it was not fully met by the income. Thus deficit had always to be maintained from the royal treasury, public treasury, provincial treasury and from some villages which were given in *waqf* for this purpose. *Mirat* informs that the deficit amount was paid from the royal treasury.[107] For the upkeep of the mausoleum and garden of Taj Mahal, 30 villages of Agra were given in

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[103] *Tuzuk*, p. 214.
[104] Ibid., p. 208; See also Commissariat, *A History of Gujarat including a survey of its Chief Architectural Monuments and Inscriptions*, (Bombay, 1937-38), II, p. 62.
[105] *Mirat*, I, p. 308.
[106] Ibid., p. 238.
[107] Ibid., (suppl), p. 184.

waqf, while additional two lakh rupees were generated from the house rents..[108] The salary (*tankhwah*) of the staff of the gardens of Ahmadabad was given from the provincial treasury (*khazana-i amra*). A fixed amount was annually allotted for the maintenance and repair of Shahi Bagh from the treasury.[109] In1691 AD a Royal order was issued to Shuja't Khan, *diwan*, that the allocated amount for the repair works of Shahi Bagh and Nagina Bagh should be disbursed from the public treasury.[110] The author of *Khulasat-ut Tawarikh* records that the premier noble Ali Mardan Khan had been assigned 2000 villages of Sodhra for the repair of the garden and city.[111] However, extra revenue was being accrued by the State, though not more than expenditure, as there were taxes levied on gardens albeit with concessions.

After assessing the level of expenditure, curiosity arose to know about the income from those gardens to meet the expenditure on their maintenance and to know whether there was any commercial objective of those gardens? In the paucity of direct information of the revenue from gardens in Mughal India, the raised questions are yet unanswered. However, though the information of the gardens of Delhi Sultanate is almost negligible yet Afif informs that a revenue of 1, 80,000 *tankas* was realized from the gardens of Firozshah Tughlaq.[112] Likewise, the author of *Mirat-i Ahmadi* provides information that the *nazim* of the *suba* appropriated the income of the gardens of Ahmadabad.[113] Commenting on the commercial aspects of Mughal gardens, Irfan Habib has explained that most of the gardens were designed to produce fruits and flowers for their own use but entire crop of fruits and flowers produced in Mughal Gardens could not have been consumed at their owners table.[114] When the fruits and flowers of quality from special gardens of the private persons were brought for the emperor, doubtlessly, price was to be paid to them and garden produced income. The mangoes of Gujarat, Bengal and Deccan were considered of good quality. Thus, evidence suggests that seeds were brought from those places to the garden of Muqarrab Khan at Kairana. The authors of *Iqbalnama-i*

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[108] Salih Kambuh, *Amal-i Salih*, II, p. 294.
[109] *Mirat* (Suppl.), pp. 22, 185.
[110] Ibid., p. 19; I, pp. 328, 388.
[111] Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 98.
[112] Shams Siraj Afif, *Tarikh-i Firozshahi,* (Calcutta, 1890), p. 295.
[113] *Mirat* (Suppl), pp. 21-22.
[114] Irfan Habib, 'Notes on the Economic, op. cit., p. 131.

Jahangiri and *Masir-i Jahangiri* inform that in 1683 AD, a royal order was directed to the *nazim* of the *suba* of Gujarat that the choicest mangoes of the garden of Amin Khan (*nazim*) should be brought to the royal presence (Aurangzeb).[115] Thus, mangoes of superior quality must have yielded income. Furthermore, the income was generated by sub-letting the gardens for commercial purposes. If traveler Finch is to be believed then, the imperial garden of Sirhind (Punjab) had been rented on rupees 50,000 per annum.[116]

Besides fruits and flowers, vegetables were also grown in the gardens for commercial purposes. Evidence shows that officers (*hukkam*) and wealthy persons (*ahl-i daulat*) produced vegetables (*tarkari*) and fruits (*mewa*) in their private gardens and sold them to vegetable dealers (*tarkari faroshan*) with an increased price of ten, twenty times.[117] *Mirat* informs that in the garden of Bhadra alongwith vegetables, flowers like rose (*gul),* tulip (*shaqaiq*) and green basils (*riyahin*) were planted to generate income.[118] The production of rose was enhanced as commercially the extraction of rose water was needed on a large scale.[119] To check the corruption or coercion involved in selling the produce of garden, a *farman* was issued to the *jagirdars* of Gujarat in 1673 AD to prohibit the selling of food grains and mangoes or other produce of their gardens, by compulsion (*ba-trah*) to the merchants, artisans and common people.[120] The order, issued in 1683 AD, by Aurangzeb also asked to report the income of the garden of Amin Khan.[121] Another order was issued in 1695 AD to the *diwan* of the same *suba* to take steps to increase the verdancy of Shahi Bagh.[122]

Evidence suggests that besides expenditure, some income was also procured from the gardens by selling fruits, flowers and vegetables. Although income was generated from the gardens, it seems evident that those amounts were insufficient to meet out the

[115] *Mirat*, I, p. 304; Mu'tamid Khan, *Iqbalnama-i Jahangiri*, ed. Maulvi Abdul Ha'i and Ahmad Ali, Bib. Ind., 3 vols., (Lucknow, 1870), III, p. 557; Khwaja Kamgar Hussain, *Masir-i Jahangiri,* ed., Azra Alvi, (Delhi, 1978), p.299.
[116] Finch, *Early Travels,* p. 158.
[117] *Mirat*, I. p. 261.
[118] Ibid., II. p. 420.
[119] For the details of the production of rose water, see the Vth chapter 'Mughal Gardens: Mughal Gardens: A Study of Horticulture'.
[120] *Mirat*, I, p. 287.
[121] Ibid., p. 305.
[122] Ibid., pp. 337-8.

prevailing expenditure of the gardens. Aurangzeb ordered that no tax on groves (*sar-i darakhti*) should be levied where the expenditure exceeded the income.[123] An official document reveals that even after Aurangzeb, a *parwana* of Syed Abd Allah Khan Qutub al Mulk Zafar Jung (1714 AD) to the *mutasaddis* of *pargana* Badayun, *suba* Shahjahanabad, ordered the exemption of the payment of garden tax (*sar-i-darakhti*) where the expenditure exceeded the income [124] (**Document: II).** Inscriptional evidence supports the archival information that gardens generated income. Inscriptions of Ahmadnagar, dated 1572-73 AD, record that fruits of the mosque gardens were given to the care-takers in lieu of their services.[125] There were gardens, given in *waqf* to the mosque to please God; as an income and livelihood for the caretakers and for the essential repair; for the carpet and lighting of the mosque and for the conduits, but the trusteeships (*tauliyat*) was strictly restricted to the family member of the donor.[126] It clearly indicates that the care takers were free to generate income, by selling the garden's produce, to spend on the upkeep of the mosque as well as on their own livelihood.

Apart from income-generating approach of the State to meet out the expenditure of the gardens, we have evidence to presume State patronage to the gardens by way of remitting taxes. Abul Fazl informs that Akbar, as a thanks offering to the Almighty, remitted a tax on each tree (*sar-i darakhti).*[127] Literary evidence finds archival support. A *farman*, issued by Akbar in 1579 AD, records that 75 *bighas* of land in *mauza* Jaudanpur, *sarkar* Sambhal, had been granted for laying out garden with tank and well, which would be free from all levies[128] (**Document: III**). Thus, evidence points to the fact that, probably, garden tax would have been levied earlier but was exempted by Akbar which was later on followed by his successors. During the reign of Jahangir, State had not levied taxes on fruit trees.[129] It was ordered by Jahangir that whosoever made gardens even on arable land (*mazra'i*), which previously generated revenues, had to be exempted

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[123] Ibid., pp. 263-64.
[124] Accession No. 2323, NAI, New Delhi, (Vide CAD, I, S. No. 332).
[125] *EI (A&P), 1933-34*, p. 11.
[126] Ibid., *1933-34,* p. 11; *1939-40,* p. 30; *1955-56,* pp. 83-84; For depiction of gardens in the inscriptions cf. Sadaf Fatma, 'Gardens in Mughal India in the Light of Inscription', *PIHC,* (New Delhi, 2014), pp. 297-304.
[127] *Ain,* tr., H.S. Jarrett, LPP, (N. Delhi, 2008), II, p. 72.
[128] Accession No. 2122, NAI, New Delhi, (Vide CAD, I, S. No.26).
[129] *Tuzuk,* pp. 251-2.

from taxes.[130] Likewise, Shah Jahan issued a *farman* to Zafar Khan, governor of Kashmir, which still exists on stone slab fixed on the gate of Jami Masjid Srinagar. The *farman* codified that 'no *subedar* should lay an embargo on the fruit or the orchard of the garden of anyone. The governors, collectors and the officials of present and future days in the province of Kashmir would consider these orders as lasting and eternal'[131] (**Plate: XXIII**). The *farman* tends to suggest that the *subedar* used to send their own henchmen to each garden or orchard, in the season, to collect fruits and produce of the garden, thus putting the owners at loss.

However, the State shifted its policy from tax exemption to resumption of taxes in the reign of Aurangzeb. The documents indicate that taxes were levied on fruits of the gardens, if the gardens covered the cultivable and revenue producing lands. The tax on the gardens was in a flat rate of two rupees and three quarter coins (Rs. 2¾).[132] It was strictly ordered by Aurangzeb in a *farman* issued in 1668 AD to Muhammad Hashim that this amount (Rs. 2¾) should be taken even from barren trees, except almond (*badam*) and grape (*angur*) plants, charged only when they bore fruits.[133] Often taxes were fixed after assessing the quantity of fruits. It was 1/5 th of the produce, taken from Hindus and 1/6th from Muslims. [134] The incomes of the imperial gardens as well as collected taxes from the gardens owned privately were deposited in the provincial treasury.[135] Thus, from the time of Aurangzeb onwards, taxes were levied on all orchards except for those containing graves or yielding no profits or where expenditure exceeded income.[136] The tomb gardens were ever exempted from the garden tax.[137] Once an order had been issued for the withdrawal of *sar-i darakhti* when Shaikh Pir Muhammad submitted a representation that his garden was containing the tombs of his ancestors, as tomb gardens were exempted

[130] Ibid., p. 252.
[131] Cf. Sufi, *Kashir*, I , pp. 268-69.
[132] *Mirat*, I, pp. 271-72.
[133] Ibid., p. 272.
[134] *Nigarnama-i Munshi*, pp.98, 152; Irfan Habib, *Agrarian*, p. 285.
[135] M.P. Singh, *Town Market, Mint and Port in the Mughal Empire, 1556-1797* (an Administrative-*cum*-Economic Study), (New Delhi, 1985), p. 124.
[136] *Mirat*, I, pp. 271-72; Accession No. 2323, NAI, New Delhi, (Vide CAD, I, S. No.332).
[137] *Mirat*, I, pp. 271-72; *Nigarnama-i Munshi*, pp. 98, 152; *Early Travels*, pp. 315-16; Pelsaert, p. 5.

from paying the tax.[138] Gardens given in *madad-i ma'ash* grants were also exempted from the payment of any kind of tax. A *farman* of Shah Jahan (1633 AD), addressed to the officials of *pargana* Ander, *Sarkar* Saran, *suba* Bihar, records that the garden and bazar situated in the village Hashimpura, *pargana* Bara of the same *suba*, had been given as *madad-i ma'ash* to Sayyid Kamaluddin, son of Sayyid Ashraf Imam with the exemption of all taxes.[139] Another *farman* of the same emperor, dated 1643 AD, issued to the officials of *pargana* and *sarkar* Hajipur, *suba* Bihar, states that a garden in *mauza* Dekhte of the same *pargana*, given as *madad-i ma'ash* grant to Fatima, daughter of Kala Bibi Rashida, should not be accounted for any taxes.[140] Other *chaknamas* and *parwanas* of the late seventeenth and early eighteenth century, preserved in National Archives of India corroborated earlier informations that the gardens, granted as *madad-i ma'ash*, were exempted from all taxes.[141] Thus, the income of these gardens was privately being enjoyed by the grant holders.

Now there is a need to throw some light on the management, officials, other staffs, and finally the architects of the gardens. It is worth noting that these aspects have totally been ignored by the modern scholars working on gardens.

Scattered literary evidence indicates that the garden staff was appointed under the seal of the *mir-i Saman*, while for the gardens in *subas*, appointments were approved by the *diwan-i Suba* also.[142] The reference suggests the establishment of a separate department to look after the repair works of the fortifications and gardens in Gujarat. The provincial government under the seal of *darogha*, sanctioned needed amount of expenditure but on account of the extended expenditure, the provincial government reported to the Emperor.[143] Thus all the gardens of the city of Ahmadabad were looked

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[138] The order is contained in Munshi Gopal Rai's paper, arranged by Sahib Rai Surdaj (1688-89), *Durrul Ulum*, (Bosleian Library, Oxford), Walker104, ff. 55b-56a, as cited in Irfan Habib, 'Notes on the Economic', op. cit., p.135 note.
[139] Tirmizi, *Mughal Documents*, II, p. 50.
[140] Ibid., p. 73.
[141] Accession Nos. 303, 1836, 2136, 2166, NAI, New Delhi, (Vide CAD, I, S. Nos.118, 346; II, S. Nos. 215, 218).
[142] *Mirat* (Suppl), pp. 184-85.
[143] Ibid.

after by this provincial department.[144] Provincial *diwan*,[145] being the financial minister of the State, was responsible for the maintenance of the gardens. The evidence contained in *Tuzuk* clearly indicates that when Abdullah Khan Firozjung made harm to the garden of Nizamuddin Ahmad, a *farman* was issued to the *diwan* to look after the matter and punish the culprit.[146] Abdul Hamid Lahori informs that Shah Jahan celebrated the Nauroz festival in the garden of Hafiz Rakhna in 1634 AD and ordered Dayanat Khan, the *diwan* of *sarkar* Sirhind, to build few more buildings in the palace garden.[147] A *farman* was issued by Aurangzeb to Mohammad Hashim, the *diwan of* Gujarat, for the collection of taxes from the garden.[148] Thus, *sahib-i diwan* was the main officer responsible for the maintenance of the gardens.

Under the supervision of *diwan,* the *karori* (revenue collector) was responsible for the collection of taxes from the gardens for the upkeep of the gardens.[149] Often well-acquainted *karoris* were appointed to keep the gardens in order. When Jahangir came to know that after the death of Hafiz Rakhna, his garden at Sirhind was not in proper condition, he appointed Khwaja Waisi in 1617 AD as the *karori* of Sirhind who was expert in agriculture (*zara'at)* and constructional works. Khwaja Waisi, in a short duration of 40 days, rehabilitated the garden to its former position. Thus, the *karori* of Sirhind received favours from the emperor.[150] Next to him, Mir Ali Akbar became the *karori* of Sirhind in the reign of Shah Jahan who built *Mehatabi chabutara* or moonlight platform in 1638 AD in the same garden.[151]

Mir-i saman with the approval of the provincial *diwan,* appointed other staffs to look after gardens, such as superintendent (*darogha)*- an unconditional *mansabdar,*

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[144] Ibid., p. 185; Also see, Hamida Khatoon Naqvi, *Urbanisation and Urban Centres under the Great Mughals: 1556-1707*, vol. I, (Simla, 1972), p. 104.
[145] Provincial *diwan* was appointed by the Royal orders and received his *sanad* under the seal of the *wazir* whose duties were the collection of revenue, payment of salary under his signature and similar other duties in connected with taxation and expenditure etc. (*Mirat*, I, pp. 337-38, 388; (Suppl), p. 171).
[146] *Tuzuk,* p. 208; See also, Commissariat, *History of the Gujarat*, II, p. 62.
[147] Lahori, *Padshahnama*, II (i), pp. 115-16.
[148] Cf. *Mirat*, I, pp. 271-72: Also, Jadunath Sarkar, *Mughal Administration*, (Calcutta, 1972), pp. 134-144.
[149] *Ain*, II, p. 43; Also see, Jadunath Sarkar, *Mughal Administration*, pp. 57-58.
[150] *Tuzuk,* p. 283; Also, Subhash Parihar, *Mughal Manuments*, p. 10.
[151] Lahori, *Padshahnama*, II (i), pp. 115-16.

treasurer (*mushrif*) and accountant (*tahvildar*).[152] In the province of Gujarat, the salary of an accountant and treasurer was Rs. 35 and Rs. 20 per month respectively, while rupees 95 was allotted to the gardeners. Besides higher officials and gardeners, there were guards and sweepers to protect and clean the gardens.[153] The superintendents of gardens (*darogha-i baghat*) were responsible for overall supervision of the gardens.[154] When Jahangir visited the gardens of Gulafshan on the bank of Jamuna, Kwaja Jahan was the in-charge (*darogha-i bagh*) of the garden who presented offerings to him.[155] Firishta's account, supported by epigraphic record, indicates that Nimat Khan was the superintendent of Farah Bagh (*Sarkar-i bagh*) of Ahmadnagar (Deccan) under Murtaza Nizam Shah. In 1574-75 AD when the Sultan visited the newly built garden, he became disappointed. He dismissed Nimat Khan from the post of superintendent ship of the garden and appointed Salabat Khan in his stead with specific instructions to pull down the buildings and construct new ones.[156] Records suggest that the superintendent ship of garden was a dignified post, allocated to the high profile officials. This post existed till the reign of Muhammad Shah. During the period, Muhammad Ishaq Khan was promoted from the superintendent of royal gardens to the inspector of crown prince contingent.[157] It has been reported, by the author of *Muntakhab-ul Lubab,* that since the annexation of Deccan, taxes were not levied on the crops of melons (*kharbuza*) as it was sown by the poor people in the sands of the river bank, but when Mahram Khan was appointed as the *darogha-i baghat Padshahi,* he suggested the emperor to extract the tax. Thus, a separate department constituted under the office of *diwan,* appointed collectors (*amla*) for the collection of tax on melon.[158] It seems that Superintendent of gardens was responsible for

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[152] *Mirat* (Suppl), pp. 21-22, 171, 185-86.
[153] Ibid., pp. 21-22, 185.
[154] Ibid., I, p. 238.
[155] *Tuzuk,* p. 274.
[156] *EI (A&P), 1933-34,* pp. 11-12; Firishta, *Tarikh-i Firishta,* II, p. 143, records that this incident has been composed by Shah Ahmad khan Manju in a chronogram. Firishta further records that under Salabat Khan, the garden became so much prosperous with the trees of fruits that it became the matter of discussion among the people. Poets and other literati like Mulla Malik Qumi and Mulla Zahuri used to come and enjoy in this garden. Mulla Malik Qumi penned a *qasida* in praise of this garden. See also Sadaf Fatma, 'Gardens in Mughal India, op.cit., pp. 297-304.
[157] Jadunath Sarkar, *Fall of the Mughal Empire,* (Calcutta, 1932), I, p. 10.
[158] Khafi Khan, *Muntakhab-ul Lubab,* ed., Maulvi Kabiruddin Ahmad and Ghulam Qadir, (Calcutta, 1868-74), II. (i), pp. 405-6.

the up-keep of gardens only, since there was separate office and officers for the collection of taxes on fruits yielded outside the gardens.

Thus, there was a chain of officials, based on hierarchy, to look after the maintenance of the gardens. By the beginning of the 18th century, when the Mughal State was showing its weaknesses, the greedy *nazims* and other officials got their hold on the gardens. Evidence disclosed that the *nazims* got hold of the great Shahi Bagh and Fateh Bagh and treated them as their own property. Even the *nazims* of the *suba* started appropriating the income of the gardens of Shaban Bagh, and furthermore, they stopped sending fruits of myrobolam of Halela garden to the Emperor.[159] Already mentioned *farman* of the Jami mosque (Srinagar) clearly reports the grievance of *subedar* in regard to gardens where they placed their own men and did not allow the owners of the gardens to use fruits, which caused so much loss to the people that some of them even destroyed the fruit trees.[160]

The gardeners (*baghban*) formed the strong agency as beautifier and protector of the Mughal gardens. Although literary sources are almost silent, paintings of the period shed much light on their working aptitude. The *baghban* has been symbolized with good and hard works in the poetical genre. A poet Ruh al-Amin of Golkunda in his *masnawi* advised his son that ‘Don’t be a betel-vine in the scent gardens, but be a gardener in the rose gardens’,[161] meaningthat, it would be better to work in the rose gardens than being a lazy betel eater. The Mughal paintings invariably show the gardeners involved in their works with spade and hand hoe (*khurpi*) **(Plates: IV, VI, VII, XIV).** It is worth noting that the gardener’s tools have not been affected much by the technological inventions except that of certain instruments.[162] Locality Baghbanpura in Lahore reminds us that there might be a colony of gardeners in Mughal times.[163] It is believed that the Kashmiri gardeners were much in demand during the Mughal period.[164] Besides gardeners, the

[159] *Mirat* (Suppl), pp. 21-22.
[160] Sufi, *Kashir,* I, p. 269.
[161] The name of the said *masnavi* is *Falak al-Buruj* (The Sky of Zodiac Signs), written by Ruh al-Amin, the pen name (*takhallus*) of Mir Jumla of Golkunda. The manuscript is preserved in Khuda Bakhsh Oriental Public Library, Patna, as cited in Daud Ali, *Gardens and Landcape,* p. 190.
[162] Moynihan, *Paradise as a Garden,* p. 151.
[163] Abdul Rehman, ‘Garden Types in Mughal Lahore’, op.cit., p .166.
[164] Hari Ram, ‘Buildings and gardens’, op.cit., p. 139.

Mughals collected horticulturists not only from different regions of Hindustan but from Iran and Turan too.[165]

As for the architects and main builders of the gardens, just like other buildings, the sources generally praised their works but without mentioning their names and origin. It has been rightly observed that 'quite often when our Persian chroniclers narrate the building of various forts, bridges, *havelis* or gardens, instead of providing the name of the architects or master mansions, and other precise details, they confine themselves to just praising their skill (as architects)'.[166] Recently scholars have succeeded in tracing the name of few builders, their designations and salaries,[167] but builders of the gardens have gone unnoticed. More likely, the same group of builders worked in laying out the gardens who had been engaged in construction of Mughal monuments. The view is strengthened with the report that Babur had a team of experts, when he was building the palace and Lotus garden of Dholpur, under master builder Ustad Shah Muhammad who accompanied him from Kabul.[168] The construction of the gardens was entrusted to the superintendent of buildings as reported by the author of *Amal-i Salih* that Shalamar garden of Lahore was completed in the 16th regnal year of Emperor Shah Jahan under the supervision of Khalilullah Khan in the duration of one year, five months and four days.[169] It is believed that the same Khalillullah and Mulla Ala ul Mulk Tuni were involved in the construction of Asaf Khan's tomb garden at Lahore.[170] Likewise, the garden at Wah, near Hasan Abdal, was renovated and re-designed in 1639-40 AD, on the orders of Emperor Shah Jahan. The supervisor of the said garden was Ustad Ahmad Mimar, a famous architect of Lahore. The prefix '*ustad'* itself speaks of his experiences and position as the main architect, who had been awarded with the title of '*Nasir-ul Asr*' ('wonder of the age'). He happened to be the main architect of the palace of Shahjahanabad.[171]Although

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[165] *Ain*, I, p. 43.
[166] Syed Ali Nadeem Rizavi, 'Mughal architecture: Organisation, Inspirations and Design', Presidential Address, Section II: Medieval India, *Indian History Congress*, 75th Session, JNU, New Delhi, p. 1.
[167] A.J. Kaisar, *Building Construction in Mughal India: The Evidence from Painting*, (New Delhi, 1988); Nadeem Rizavi, *Mughal Architecture*, Presidential address, *IHC*, 2014.
[168] Moynihan, 'The Lotus Garden Palace', in *Muqarnas*, p. 138.
[169] Salih Kambuh, *Amal-i Salih*, II, p. 285.
[170] Ibid., Anjum Rehmani, 'The Tomb of Asaf Khan', in *Cultural Heritage of the Mughals*, ed. By Massarrat Abid & Qalb-i-Abid, (Pakistan, 2005), p. 132.
[171] Makin Khan, 'An Introduction to the Historical', op.cit., p. 458; Salih Kambuh, *Amal-i Salih*, III, p. 28.

we lack direct information of plan or *naqsha*,[172] a painting in *Akbarnama,* indicates that Babur himself was involved in laying out of a garden along with an official who was supervising the work with a rectangular sheet of paper, more likely a plan **(Plate: VI).** Thus, it has been assumed that the same method was used in the construction of other buildings[173] Toeing the same line, it may be presumed, *mi'mar* (chief architect), *muhandis* (engineer), *chah-kan* (well diggers), and *ghota khor* (well cleaners) [174] etc. had been involved in laying out the gardens too. Babur himself knew all the technalities of gardening. A painting of *Baburnama* by Miskin, an artist at Akbar's court, shows Babur's involvement in supervising the construction of gardens and planting of trees **(Plate: VII)**.

Conclusively, Garden was a significant component of 'urbanization' and urbanization worked as stimulus in laying out 'gardens'. Thus the process of urbanization during the Mughal period culminated the development of gardens. For maintenance and administration of gardens, there was a chain of officials and workers from *Mir-i Saman* down to the gardeners. Economically, gardens generated income by selling fruits, flowers and vegetables, but income was ever lesser than the expenditure. Ultimately, it led to the disparity in sanctioned and actual number of gardeners and oxen. To meet out the deficiency, the staff often pronounced concessions in taxes.

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[172] For the plan, both the term *naqsha* and *tarah* have been used by Salih Kambuh while describing the buildings of the palace of Shahjahanabad in *Amal-i Salih,* III, p. 28. See also, Nadeem Rizavi, *Mughal Architecture,* Presidential address, *IHC*, 2014; Kaisar, *Building Construction,* pp. 14-15.
[173] Nadeem Rizavi, *Mughal architecture,* Presidential address, *IHC,* 2014, p. 4.
[174] For detail of designation, position and salary etc., see Nadeem Rizavi, *Mughal Architecture,* Presidential address, *IHC,* 2014; Kaisar, *Building Construction*, p. 32.

Chapter: III

Growth of Garden Culture in Mughal India

In addition to aesthetic, architectural and economic aspects, the gardens in Mughal India created a 'cultural zone' for poets and scholars, on one hand, and for social functions and recreational programs, on the other. The gardens under the Mughals provided space for social interaction and cultural manifestation. The cultural aspects of Mughal gardens have not yet been explored, in detail, by the modern scholars and researchers studying history of gardens. Beyond discussing garden planning, hydraulic system and urbanism, they have not ventured much on the cultural growth of the gardens during the time of the Mughals.

The Timurids used to hold, besides camping, the marriage ceremonies, festivities and other functions in the gardens.[1] The Mughals, like their ancestors, continued the practice of entertaining their guests and holding ceremonies there. Thus, gardens became the center of socio-cultural activities and often served as a place for feasts, wine and music party, and other entertainments like sports, and even for composing poetry. The gardens also provided congenial environment to refresh from the administrative stress, personal agony and sadness. Gulbadan Begum in *Humayunama* notes that once Babur, to cheer his grieving wife Dildar Begum, on the death of their young son Alwar Mirza, took her and other ladies of the family to the Lotus garden of Dholpur.[2] The reference clearly shows that the garden was a place to shed the grief and to be cheerful.

Wine, music and dance parties were frequently organized in the gardens in honour of the emperors and nobles. There is frequent mention of wine parties in the contemporary sources, especially in the autobiographies of Babur and his great grandson, Jahangir. Organizing drinking parties in a garden was a common custom since the time of the Delhi Sultans and in late Timurid period.[3] Babur, for the first time, joined the drinking party in 1507 AD, organized by his close associates in Bagh-i Jahanara.[4] Later on, Babur was variously entertained in late-night wine drinking parties (*majlis-i sharab*

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[1] Lisa Golombek, 'The Gardens of Timur, op. cit., pp. 141, 142-144; Moynihan, *Paradise as a Garden,* p. 44.
[2] Gulbadan Begum, *Humayunama,* ed., A.S. Beveridge, LPP, (New Delhi, 2011), p. 20.
[3] Abdul Malik Isami, *Futuh-us Salatin,* ed., A.S. Usha, (Madras, 1948), pp. 161, 242; *Baburnama,* p. 122.
[4] Ibid., pp. 122-21, 206-07; *Humayunama,* p. 17.

or *bazm-i pyala*), in the gardens of Kabul and Agra.[5] During Jahangir's reign, imperial drinking and entertainment parties were also organized in the gardens.

Jahangir in his *Tuzuk* frequently mentions his special Thursday wine and entertainment party (*jashn-i Mubarakshamba)*[6] in different gardens of Mughal India. In the year 1607 AD, he held his Thursday wine party in the garden of Shahr-ara at Kabul.[7] In his 15th regnal year, he organized a wine party (*bazm-i pyala*) with his private attendants (*bandaha-i khas)* at the spring garden of Vernag, Kashmir.[8] The Thursday entertainments in 1620-21 AD, had taken place several times in Nur Afshan garden at Agra, in which once a dress of honour, (*charqab),* waist-belts (*qamar-band*), Iraqi and Turki horses with gold and embroidered saddles, and cash money were presented by Jahangir to his son Shahriyar.[9] Even the celebration of the commencement of the 16th regnal year (1621 AD) of Jahangir was organized on Thursday in Nur Afshan garden.[10] Likewise in Gujarat, on various occasions, Thursday wine parties were organized in honour of Emperor Jahangir in the gardens of Rustam Bagh[11] and Fateh Bagh, in which wine cups were offered by the emperor to his private servants (*bandaha-i khas*).[12] Once, Jahangir held his Thursday drinking party (*bazm-i pyala*) in the Nagina Bagh, previously built by one of the Gujarat Sultans.[13] Imitating the emperor, the Mughal noble organized a wine party in the Nishat Bagh of Kashmir, when the garden was bloomed with jasmine and rose flowers.[14] Jahanhir in his *Tuzuk* records that besides the nobles and courtiers, sometimes the wine parties were attended by the ladies of the *harem* also.[15]

The Mughal paintings exhibit vivid picture of garden wine party attended by the emperors, princes and the nobles. Often they enjoyed the party with music, vocal as well as instrumental, and dance **(Plates: I, II, III, XXII, XXV, XXVI, XXVII).** In 1638AD,

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[5] *Baburnama*, pp. 122, 149-51, 153, 158, 201; Eng. tr., 447.
[6] *Tuzuk*, p. 51.
[7] Ibid.
[8] Ibid., p.313.
[9] Ibid., pp. 325, 326, 327.
[10] Ibid., p. 328.
[11] *Bagh-i Rustam* was built by the emperor's brother Shah Murad after the name of his son Rustam. (*Mirat* (suppl), p.22; *Tuzuk*, p. 211).
[12] Ibid., pp. 212, 214, 237.
[13] Ibid., pp. 215-16.
[14] *Tarikh-i Hasan*, p. 303.
[15] *Tuzuk*, p. 51.

Mandelslo attended a music and dance party, arranged in the garden of Azam Khan (*Nazim* of Gujarat), in which women were also present.[16] Jahangir introduced in India a typical Central Asian 'cooking festivity' *Bughra,* prevalent in Khwarizm and Badakhshan. He combined this *Bughra* event with Afghan *arghustak* dancing, which was once arranged in the Shahr-ara garden in the presence of the emperor. After function, Jahangir rewarded the performers (*bughraiyan)* with dress of honours (*khil'at*) and rupees one thousand.[17] The said entertainment, mentioned in the memoir, has been corroborated by a painting of the manuscript of *Jahangirnama*, painted by Abul Hasan (c.1607). The painting depicts the five bearded *bughraiyan*, looked as learned men, performing the famous Afghan *arghushtak* dance, clapping in different poses by raising their hands and singing in front of a large cooking pot, placed on the hearth, in the presence of the emperors along with some others (**Plate: XVIII).** In the summer evening luxurious feasts were given in the Shalamar garden of Kashmir, where lamps were hung in the branches of chinars and guests were entertained by dance and music.[18]

Music and dance parties in the gardens were a common practice enjoyed by other nobles and rulers in the Mughal *subas.* A miniature painting of *Razmnama* of Akbar's time displays a dance and music scene of the *swaymbar* ceremony of Damyanti, Daughter of Vidarbha king Bhima, in which female dancers performed dancing on the tune of *mridanga*, flute, string instrument and castanets played by the male companions in an un-walled garden with water channels, fountain, trees and plants[19] (**Plate: XXIX).** On various occasions, the nobles invited the emperors for merry-making in their gardens. Jahangir was given gorgeous reception along with his *harem*, by Asaf Khan, in the garden of Dilawez and Mirza Kamran at Kabul. The royal family spent many festive days in those gardens.[20] The same emperor was invited and entertained by the same noble in

[16] Mandelslo, pp. 32-3, 37.
[17] *Tuzuk*, p. 51. *Bughra* was a famous Central Asian dish, invented by the Khwarizmian ruler Bughra Khan, while *Argushtak* was basically a child play. Bayazid Biyat states that once Humayun held this cooking entertainment *Bughra* in Badakhshan with his intimate courtiers (*ahl-i nashist*).
[18] Sufi, *Kashir*, II, p. 528.
[19] Asok Kumar Das, *Painting of the Razmnama: The Book of War,* (Kolkata, 2005), p. 62.
[20] Latif, *Lahore*, p. 45.

his garden at Ahmadabad, where the emperor was amused by the splendor of his *haveli* garden.[21]

Besides pleasure parties, the Mughal gardens had invariably been used for social ceremonies like, birth and weddings as well as political ceremonies, such as royal coronation etc.[22] A miniature painting of *Tuzuk-i Baburi* exhibits the scene of a feast at Humayun's birth, as the writing *wiladat-i Humayun* (birth of Humayun) on the painting also suggests, in a planned garden with much pomp and ostentations. Babur, along with his nobles, enjoyed delicacies and performances by singers, dancers and musicians **(Plate: XXVII).** The painting finds literary support that Babur celebrated the birth of Humayun and gave a splendid feast in a *chaharbagh* garden outside the city Kabul. Nobles and other respected persons brought gifts and money in such a large quantity that Babur says, 'such a mass of white *tankas* was heaped up as had never been seen before'.[23] In another painting (c. 1550), Emperor Humayun has been depicted as receiving his brothers while sitting on a rustic stone throne in the garden of mountainous landscape, whereas the women of the *harem* are entertaining themselves in their separate portion. Musicians and painters, in front of the emperor, are seen busy in their job. (**Plate: XXX).**

In India, the tradition of holding convivial parties by the Muslim rulers goes back to Sultanate period.[24] The emperors used to organize these convivial parties as symbol of their prosperous and just rule. Sometimes, festivals were also celebrated in the gardens. Babur himself mentions in *Baburnama* that the holy month of Ramazan (1527 AD) was spent in the garden of Hasht Bahisht at Agra.[25] Then, Babur visited the newly built Bagh-i Fatah at Sikri, in the last days of Ramazan, where the tents were setup on stone platform to celebrate the Eid Feast.[26] Likewise, evidence indicates that Nauroz festival

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[21] *Tuzuk*, p. 237.
[22] The details of the coronation ceremonies, held in the gardens, are discussed in the Vth Chapter 'Gardens in Mughal India: A Paradisaically Political Space'.
[23] *Baburnama*, p. 136.
[24] See Fazeela Shahnawaz, *Socio-Cultural Life of the Nobility under the Delhi Sultans*, Ph.D Thesis submitted to the CAS in History, AMU, Aligarh, (2015), p. 68.
[25] *Baburnama*, p. 217.
[26] Ibid., p. 217.

was celebrated in the garden of Maryam Makani, 14 *kos* away from Fatehpur Sikri, and in the garden of Hafiz Rakhna at Sirhind by Akbar and Jahangir.[27]

Other cultural events organized in the gardens were composing and reciting of poetry. Garden's blooming flowers and sound of rippling water created a soothing atmosphere for composing, reciting and listening poetry. Babur composed his first *ghazal* under the chinar tree of the garden at Burak.[28] Besides poetry, his autobiography was also written in the garden. According to Gul Badan Begum, her father (*hazrat-i Badshah Baba)* used to write his autobiography (*Tuzuk-i Baburi)* in the Sikri garden.[29] Thus, there arose an intimate and passionate relation among the poets, poetry and gardens. The only painting (c. 1610) of the manuscript of the *Diwan-i Hafiz* by Govardhan shows the bearded poet Hafiz, probably holding a book of his poetry, greeting a young prince in formal parterre garden with fountain and series of water channels **(Plate: XXXI)**. Another painting (c.1640) of the same painter, Govardhan, in the manuscript of *Gulistan,* depicts Sa'adi as standing in the rose garden (**Plate: XXXII).**

Besides poetical aspects, gardens also provided scholarly atmosphere for imparting knowledge and discussion with the learned and the scholars. A Mughal painting of the reign of Jahangir (c.1610-25), by Mohammadd Ali, sketches Maulana Rumi as a teacher, sitting in a garden and instructing the student **(Palte: XXXIII).** Another painting, of Minto Album, shows not only the emperor Jahangir but also the young princes Dara Shikoh and Parvez benefitting from the company of learned men and sages in the gardens (**Plate: III, XXV)** Besides sages and learned men, painters and calligraphers could also be seen involved in their works in front of their patrons. An illustration of *Ikhlaq-i Nasiri* of Nasir-ud Din Tusi, illustrated during the reign of Akbar (c.1590-95), highlights involvement of painters and calligraphers in their respective arts in the garden pavilion. One artist has been shown as receiving instruction from the emperor (**Plate: XXXIV)** An early seventeenth century painting shows Babur in a

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[27] *Akbarnama,* Eng. tr., III, p. 645; Lahori, *Padshahnama,* II (i), pp. 115-16.

[28] Villiers Stuart, p.16. One of the verses of Babur, thus read:

> 'I have found no faithful friend in the World but my soul,
> Except my own heart I have no trusty confidant.'

[29] *Humayunama,* p. 19.

landscape garden with his secretary or scriber who was busy in drafting imperial dictate (**Plate: XXXV)** .

As a public place, gardens served the purpose of enjoyment for people as club where lovers enjoyed love making and met each other in seclusion. More likely, the calmness and serenity of the natural ambience of the gardens provided congenial atmosphere for the couples. However, this practice was very old in India. In poetic descriptions of earlier times, we find that lovers like Manohar and Madmalti, ancient poetic characters, used to meet in the gardens and their wedding, too, took place in a garden.[30] *Kamasutra* records that from ancient days, gardens provided merry-making place for the king. Whenever the king liked any female visitor to his garden and wished to seduce her, then as per direction his servant girl lured the woman on the pretext of showing her the charming things of the gardens.[31] This ancient Indian tradition continued till the time of the Mughals and became more common. A painting made by Govardhan (c.1620), exhibits emperor Jahangir in love with Nur Jahan by embracing her in his arms, flanked by two female attendants, in a garden **(Plate: XXXVI).** Another painting shows Jahangir and his son Khurram (later Shah Jahan) feasted by the same empress Nur Jahnan along with other women in a pavilion garden, patterned on Nur Afshan or Ram Bagh at Agra **(Plate: XXXVII).** A painting depicts an intimate love scene of a newly married prince Shah Shuja, (married in 1633 AD). The newly married couple is shown gazing intimately in each other's eyes, seated in front of geometrical rectangles flowerbeds with auspicious *swastikas* in a garden, surrounded by girls, attendants and musicians **(Plate: XXVI).**

The multi-faceted Mughal gardens even served as the night clubs for merry-making. A sixteenth century Mughal painting (c.1580) shows night scene, as moon and stars suggest, with different structures constructed in the walled garden. The garden displays the Mughal characteristics of tanks, fountains and beds of flowers and trees. The painting further exhibits a young couple meeting secretly, while a woman is sleeping on the bed of flowers, while other visitors, male and female both, seated alone, probably

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[30] Ali Akbar Hussain, *Scent in The Islamic Garden*, p. 94.
[31] Daud ali, *Gardens and Landscape*, p. 51.

waiting anxiously for their lovers **(Plate: XXXVIII)**. The Mughal emperor Muhammad Shah, known for his fondness of women, thus receiving the title *Rangila Shah***,** has been shown in the *harem* gardens with women **(Plate: II).** It has been observed that most of the *harem* gardens were constructed adjacent to the king's garden so that the king could see the amusement of the ladies from the colonnade of the palace.[32] Two paintings of the Deccan Sultanate show Sultan Hussain Nizam Shah, contemporary of Akbar, enjoying in the pavilion gardens with his queen Humayun, by sitting near each other and holding hands, in the presence of the female attendants of the *harem,* in the green background with red flowers and fruits of a garden **(Plates: XXXIX, XL).**

Evidence relates to other kind of entertainments, games and sports, played in the gardens. Once Jahangir, after the wine session held in Shahr-ara garden, ordered his fellow nobles to jump over the stream which flowed through the middle of the garden and was about 4 *gaz* in width. As a result, most of them could not jump and fell either on the bank or into the stream, but the emperor jumped over the channel, though he was of 40 years of age at that time.[33] The old aged king Bahadurshah Zafar enjoyed in the garden of Lal Qila, built on the bank of Jamuna, with the pleasure of an excursion on the river every morning and evening. [34] Besides participating in the games themselves, they used to enjoy by watching some games, played by others in the gardens; organized in the perhaps wrestling was prominent. A Mughal painting displays a wrestling competition, watched by the emperor sitting in the pavilion of a garden with other courtiers, between an old wrestler with his young opponent **(Plate: XLI).** One of the Indian celebrated festivals Holi was also being organized in gardens. Shaista Khan, Mughal governor of Deccan under Aurangzeb, played Holi with women to enjoy the spring festival of colour in a well plotted garden with flowers and mango trees **(Plate: XLII).** Under the Mughals, watching and flying birds formed the natural sort of amusements. During the time of early Mughals, Mahmud Balkhi, the author of *Bahr-al Asrar,* witnessed various kinds of birds, beasts and animals in the garden of Hafiz Rakhna at Sirhind,[35] Likewise, doves

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[32] Leopold Von Orlich, *Travels in India including Sinde and the Punjab,* tr., H. Evans Lloyd, (London, 1845), II, pp. 96-97.
[33] *Tuzuk*, p. 51.
[34] Orlich, *Travels in India,* II, p. 25.
[35] Subhash Parihar, *History and Architectural,* p. 205.

were kept in the Lal Qila garden for the amusement of the king.[36] Orlich, who visited India during the time of Later Mughals, witnessed that Jat Raja in his *chaharbagh* orchard kept rams, cocks, antelopes and quails for fighting and innumerable favorite birds for the amusement of his wives.[37]

One of the important aspects of the garden was just to ramble, enjoy and get fresh air. *Mirat-ul Haqaiq* furnishes evidences that the Hayat Bakhsh garden of Red Fort and Angoori Bagh of Agra fort were frequently visited by prince Muazzam, fourth son of Aurangzeb, just to perambulate (*bara-i sair*) alongwith the ladies of *harem*.[38] It has also been recorded that the garden of Mulla Abdul Ghafur, situated on the bank of river Tapti at Surat, was visited by a number of dignitaries for amusement.[39] A painting shows the emperor Muhammad Shah viewing his garden on palanquin, with a favorite falcon in his hand, and enjoying the sight **(Plate: XLIII.)**

The garden amusement and recreation was also traditionally followed by the wealthy people as well as foreigners in their private gardens. The English and Dutch officials and factors of the Company used to arrange entertainment parties in their gardens. These parties have variously recorded by the travelers who were frequently invited by the English and Dutch in their gardens. A German traveler Mandelslo, invited by the English in his garden built outside Surat town, in which they used to resort on Sunday, after the sermon, for various enjoyments. One of the recreations was shooting and bathing in the deep tank. Finally there was entertainment performed by Dutch women with much civility. As Mandelslo was expert in shooting, he also participated in this game in the English garden.[40] English president used to invite all the factors on solemn days to enjoy and spent 2-3 hours in his gardens with wine and other cold collations, where the president and his lady were brought in palanquin.[41] It was not only English in their gardens, but the Dutch also hosted enjoyment parties in their gardens, with wine and

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[36] Orlich, *Travels in India,* II, p. 25.
[37] Ibid., pp. 71-73.
[38] *Mirat-ul Haqaiq,* ff. 187b, 188b, 191b, 194a, 195b, 196a-b, 197b, 200a, b, 204b, 207a, 212b, 213a, b, 214b, 216a, 220b, 248a, 250b, 256b, 262b, 268b, 278b, 294a, b, 299b, 305a, 307b, 309a, 312b, 313a, 321a, b, 327a, 329a.
[39] Ibid., f. 381b.
[40] Mandelslo, p. 5.
[41] Ovington, pp. 132-33.

other collations.[42] Gardens in the Ramanturuttu or Candle Island on the coast, South of Kochin, were the favourite resort for the picnic parties of the Dutch gentry.[43] Tavernier was also amused pretty well in a good part of the night during his stay in the Dutch garden outside Masulipatam.[44] Thus, they were imitating the Mughals not only in garden design but in living style and entertainment.

Although the social and cultural activities in the Mughal gardens were influenced by the Iranian features, this was also a common ground in between the French and Mughal garden to serve as the place of court ceremonies with the marked difference that Mughal garden provided a separate space to seclusion and informal living while in French garden there were mixed gatherings.[45]

The cultural activities held in the private gardens tend us to believe that apart from private amusement, gardens were also built for general public. Evidences would have us believe that building of gardens for public use was considered one of the noblest acts since ages. The tradition of the plantation of shady trees, for public welfare, goes back to Ashoka's time in India.[46] During Delhi Sultanate, laying out of gardens was one of the most important public welfare measures, especially adopted by Firozshah Tughlaq.[47] In view of the author of *Muntakhab-ul Lubab* the emperors laid out gardens, often, for the use of common people too.[48] Sometimes the gardens of the individual nobles were also accessible to the public and sometimes they were intentionally built for that purpose. It is said that under the Mughals, gardens and orchards were built by private persons for the benefit of general public.[49] The writer of *Masir-i-Rahimi*, while commenting upon the garden of Abdur Rahim Khan-i Khanan at Surat, records that this garden was for the use of all creatures of God, thus serving as the stroll passage for

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[42] Pietro Della Valle, I, pp. 39-41.
[43] Padmabha, *History of Kerala,* pp. 212-13.
[44] Tavernier, I, p. 207.
[45] Sylvia Crowe et. al., p. 55.
[46] Rock Edict II and Pillar Edict VII, Cf. Irfan Habib, 'Notes on the Economic', op. cit., p. 137.
[47] Nizamuddin, the author of *Tabqat-i Akbari,* says that Firozshah Tughlaq did a public welfare work like building of *madrasa, Khanqah,* mosque and gardens where he gives the number of other kinds of monuments like 200 *khanqahs,* but when it comes to the gardens, he says they were innumerable. (Ahmad, Nizāmuddīn, *Tabaqāt-i Akbarī,* Nawal Kishore edition, (Lucknow, 1975), p. 121).
[48] *Muntakhab-ul Lubab,* II (i), p. 406.
[49] Villiers Stuart, *Gardens of the Great,* p. 23.

traveller and as a resort for local people.[50] Shahi Bagh and Fateh Bagh of Ahmadabad were the place of perambulation and promenade of the citizens, where urban people used to go to take fresh air.[51] Jahangir, on his visit to Shahi Bagh, ordered to fix a table of marble (*Sang-i marmar*) so that one could lean one's back on it and sit there.[52] Lashkar Khan, *subedar* under Shah Jahan, made a garden on the North of Dal Lake at Srinagar which became a resort (*sair-gah*) for the people of the city.[53] Likewise, Muhammad Ashraf, brother of Mutamid Khan, laid out a garden at Lucknow (1630-31AD) which was used as a public resort (*sair-gah-i alam*) and was named as 'the Garden of Friends' (*dostan-i bustan)*, as the inscription engraved on the gate of the garden suggests.[54] The garden of Azam Khan was laid out and was made public for the creatures of God (*khalq-ul-Allah)* to take advantage of it.[55] The traveler's accounts and inscriptions made it clear that, there were so many gardens in Surat and about fifteen gardens at Cambay, accessible to the general public.[56] Thus, there were gardens open to the general public, especially in Mughal Gujarat, a place of heterogeneous castes and communities due to its flourishing trade and commerce, where people used to share their feelings, sentiments and community life.[57]

However, some of the gardens, initially laid out as 'private', in course of time became 'public' which has also been endorsed by the inscriptions and graffiti. The garden of Fatah Mahal in Bijapur, built by Syed Saifullah al Husaini, was initially a private garden as it has been mentioned in the inscription, but it became public soon after its endowment to the mosque.[58] Graffitis, found at Shalamar garden of Kashmir, clearly

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[50] Abdul Baqi Nihawandi, *Masir-i-Rahimi*, ed. M. Hidayal Hassam, (Calculla, 1910-31), II, pp. 611-12.
[51] Ibid., p. 607; Thevenot, p. 15.
[52] *Tuzuk*, p. 241.
[53] *Waqiyat-i Kashmir*, p. 231.
[54] *Masir-ul Umara*, III (i), p. 434.
[55] *Corpus Inscriuptionum Bhavnagri*, p. 46. The traveler was invited by Azam Khan in that garden and was entertained by the women dancers and wine party (Mandelslo, p. 32).
[56] Finch, *Early Travels*, p. 135; Thevenot, pp. 35-36, Fryer, p. 104; Mandelslo, p. 42; *Corpus Inscriuptionum Bhavnagri*, pp. 45-46.
[57] Sadaf Fatma, *Urban Life in Mughal Gujarat*, M.phil Dissertation, submitted to the CAS, Department of History, AMU, Aligarh, (2010), p.30; Also see, Idem, 'The Community Life in Mughal Gujarat: An Entity of 'Syncretism' ed, S. N.R. Rizvi, *Narratives of the Shared Past: Gangetic Valley through the Millennium*, (New Delhi, 2015), pp. 110-111.
[58]*EI (A&P), 1933-34*, p. 11*; 1939-40*, p. 30; *1955-56*, pp. 83-84.

suggest that in later times the garden became accessible to the common people.[59] The first dated graffito of 1703 AD, in the main hall of the pavilion in Shalamar garden, records that scrawler visited the garden along with an important officer (*ba fazilat o tauliyat panah*). The second graffiti (dated 1718 AD) mentions that the garden was visited by the family of a Pandit, while the third (dated 1741AD) records that Ziaullah by chance (*ba ittefaq)* reached alone (*tanha)* and saw that the entire Shalamar was ruined (*wiran*).[60] These graffitis **(See, list of Inscriptions, Appendix: I)** suggest that till the beginning of the eighteenth century, access to the garden was limited to the officials and nobles only, but with the passage of time it became more accessible for the general public. Later on, the negligence of the officials ultimately caused the decay of the garden. This garden is described by Jahanagir also as one of the resort (*sair-gah*) of Kashmir.[61] Thus, evidence suggests that the imperial Shalamar garden of Kashmir as well as Lahore, in course of time, converted into public garden.[62] Likewise, the garden of the regional kingdom of Burhanpur (Deccan), which was rebuilt splendidly on the site of the garden of the Faruqui kings by Abdur Rahim Khan-i Khanan, the viceroy of Deccan in the end of sixteenth century, was previously a private garden but in course of time became a public resort with its gate(s) opened to the select as well as the general public.[63]

Classification of the portions of the gardens for imperial, *zanana* and the nobles further indicates the phase wise opening of the gardens for public use. In most of the pleasure gardens of Mughals, lower terrace was for the use of general public and upper terrace was for the private use of royalty including nobles, while the upper most was reserved for the royal ladies (*zanana).*[64] Erection of garden structure *Diwan-i Am* in the Shalamar gardens of Kashmir and Lahore further corroborate that the lower portion was

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[59] My respectful thanks are due to Irfan Habib, Professor Emeritus, Aligarh Muslim University, Aligarh who gave me the personal record of the graffiti which was observed and copied by him, during his visit to Kashmir, in 1977 AD; See also Irfan Habib, 'Notes on the Economic', op.cit., p. 137.

[60] Irfan Habib's reading. It is written in the graffito dated 19 May, 1741 AD that after seeing the ruined condition of Shalamar, Ziaullah (a visitor) cursed the officials (*mutasaddiyan)*: 'Let God similarly destroys their houses! Amen, Amen, Amen!'

[61] *Tuzuk,* p. 303.

[62] Ibid., Ihsan H. Nadiem, *Gardens of Mughal Lahore,* (Lahore, 2005), p. 44.

[63] *Masir-i-Rahimi*, II, pp. 598-600.

[64] Abdul Rehman, 'Garden Types in Mughal Lahore', op. cit., p. 165; Ali Akbar Hussain, *Scent in the Islamic,* p. 31.

meant for common people. Often on account of the absence of boundaries in some gardens, people managed their illegal access to the gardens.[65]

Some gardens were exclusively built for private amusement. For example, Nishat Bagh in Kashmir had always remained a private garden since its foundation. At the time of Aurangzeb an order was issued, on the recommendation of Muharram Khan, that the entry of common people should be restricted in the Imperial gardens, thereby reserving them for private use in all *subas.*[66] Bhimsen clarifies that uptill this order, the doors of the gardens were always open to all, but now entertainment rights for public were restricted. Later on, this restriction gave birth to bribery. The interested garden goers confirm their entry after giving some money to the care takers (*muhafiz).*[67] Private gardens could also be sold and bought by the emperor. A *farman* of Aurangzeb (1660 AD) confirms that that the emperor sold the private garden of Bawalidas Ratogi at Delhi for Rs. 5114 AD to Raja Jai Singh since it came under imperial ownership.[68] Thus, Bernier's strong belief that all land of India was owned by the king is undoubtedly fits here.[69] However, in course of time, the purchaser could also sell out the gardens as per his wish.[70] *Mirat* (comp.1760AD) mentions that gardens had been sold by their inheritor and even turned into farms for cultivation.[71]

There were three major motives, in view of Irfan Habib, behind the vide accessibility of the gardens to public. Firstly, the perception that the garden is an instrument of public welfare; secondly, the desire to spread the reputation of the builder or owner and thirdly; there was religious motive that if more people came then they could pray for the salvation of the entombed in case of the tomb gardens.[72]

The laying out of a garden had always been regarded one of the noblest acts which is clearly endorsed by the mosque inscription (dated 1582 AD) of Sherpur

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[65] Mirza Haidar dughlat, *Tarikh-i Rashidi*, ed., N.E. Lias, tr., Dension Ross, (N. Delhi, 1986), p. 425.
[66] *Muntakhab-ul Lubab*, II (i), p.406.
[67] Ibid.
[68] M.A. Ansari, *Administrative Documents*, doc no. 21.
[69] Bernier, p. 204; cf. Irfan Habib, 'Notes on the Economic', op. cit., pp. 134-35.
[70] *Mirat* (Suppl), p. 23.
[71] Ibid., p. 18.
[72] Irfan Habib, 'Notes on the Economic', op. cit., p. 137; See also, Sadaf Fatma, 'Gardens in Mughal India', op.cit., pp. 297-304.

(Bengal) that 'whoever desires that people may remember him with respect and send him blessings (*fatiha)* after his death, should try to build a mosque, a tank, a *minar*, a garden (*bagh*) or do some other good work such as charity to the recluses'.[73] The tradition of the plantation of fruit and shady trees, for the purpose of public welfare, has a long history from the time of Ashoka in India.[74] The seventeenth century inscriptions of Udgir and Bidar (1649 AD), translated and explained by Khwaja Mohd Ahmad in *Epigraphia Indica* (A&P), records that the refreshing garden, like Paradise, was laid out by Hisam-ud Din Khan as an act of generosity.[75] The nomenclature of the gardens, such as 'Farha Bakhsh' (bestower of happiness), 'Faiz Bakhsh' (bestower of bounty), 'Rahat Bakhsh' (bestower of comfort), 'Nur Afza' (light giving), 'Ishrat Afza' (pleasure giving), 'Nishat Bagh' (garden of gladness), and Dilkusha Bagh (pleasant garden) explicitly pronounce that these gardens were built to provide comfort and pleasure to the visitors.

The Mughal gardens served as a symbol of sovereignty and authority. Below the imperial or official level, the gardens were laid out to spread the reputation of the builders and were later made public to popularize their name and fame. A Kurnool inscription belonging to *Bagh-i-Muhammadi*, dated 1726-27AD, records that Bahadur Khan constructed a green garden (*sabz bagh)* with the intention that the fruit (*samar*) of his charitable work should always remain fresh and flourish (*tar-o-taza)* and the tree (*shajar)* of his reputation bedeck the World.[76]

In addition to political motive, the religious aspect also worked as stimulus in building the gardens. The motive was to receive prayers in future for the salvation and forgiveness of the entombed or builder as well as to please God through charitable works. The tomb of Humayun became the favorite destination of his descendants to make prayers, whenever they reached or left Delhi.[77] Gulabi Bagh inscription records that Mirza Sultan Beg constructed a garden with the intention that the pious could pray to

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[73] *EI (A&P), 1937-38,* pp. 21-22.
[74] Irfan Habib, 'Notes on the Economic', op. cit., p. 137.
[75] *EI (A&P), 1987,* pp. 23-26. According to Shah Nawaz Khan, Hisam-ud-Din Khan was made *qiladar* of Udgir in the 21st regnal Year of Shah Jahan (about 1648 AD). (*Masir-ul-Umara,* I (i), p. 585).
[76] *EI (A&P), 1951-52,* pp. 45-46.
[77] J. F. Richards, 'The Historiography of Mughal Gardens', op.cit., pp. 263-64.

God for his eternal life.[78] Even garden tax was sometimes exempted, just to receive favour from the God, as Jahangir himself confirms.[79] Gardens were laid out and given into charity to the mosques, shrines and religious people, just to please and to get favour of the God. The last line of the inscription (dated 1710-11 AD) from the garden of Mahaldar Khan, *nazir* under Muhammad Shah, mentions that 'Ghulam Nabi, *Nazir*, Mahaldar Khan dedicated this garden of Paradise to the God'.[80] *Bagi-i Nazir* of Delhi was also laid out by Roz Afzun, *Nazir* during the reign of Muhammad Shah in 1748 AD, to get the favour of God, as the third line of the inscription suggests that 'may Roz Afzun be ever prosperous'.[81]

References further points towards the religious motives of the builders when they endowed (*waqf*) their gardens to the mosques. The sixteenth century inscriptions of Murtaza Nizam Shah's reign mention that gardens were given in *waqf* to the mosques to please God. This further relates that the incomes of these *waqf* gardens were not spent only on public welfare but it also included the upkeep of the mosque.[82] An inscription of Ahmadnagar states that Nimat Khan,[83] just to seek closeness to Allah, endowed (*waqf*) all the cultivated portion of the Naim *bagh* of the village Savar to meet the expenses of the upkeep of the Naimiya mosque. Further the same inscription records that the remaining balance, the right of trusteeship and keeping the account of the mosque should be in the hands of his children and children of his children.[84] The Bijapur inscription states that Sayyid Shah Mardan, son of Saifullah Al Husaini, endowed (*waqf*) the garden which he constructed in his private land dedicated to the Twelve Imams and to the mosque on the condition that its right of trusteeship (*haq-i tauliyat*) would remain in hands of their

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[78] Latif, *Lahore*, p. 134.

[79] *Tuzuk*, p. 252. Jahangir exempted the tax (*sar-i darakhti*) to please the God also, as he composed a couplet for this that reads: 'when my purpose (*niyat*) is good, do Thou grant me good'

[80] Zafar Hasan, *Monuments,* II, p. 270, *Asar-us Sanadid*, I, p. 238; Nath, *Monuments of Delhi*, p. 68; Fanshawe, p. 61.

[81] Zafar Hasan, *Monuments*, III, p. 98, *Asar-us Sanadid*, I, p. 171; Nath, *Monuments of Delhi*, pp. 68-69. Both the *surah* '*Sad'* and '*Tabarak'* are the 38th and 67th *surah* of the *Quran.*

[82] *EI (A&P), 1933-34,* p. 11; *1939-40,* p. 30; *1955-56,* pp. 83-84.

[83] The same Nimat Khan who built Farah Bakhsh garden of Ahmadnagar was dismissed by Murtaza Nizam Shah from the post of the superintendent of the garden because the said garden did not please him. (Firista, *Tarikh-i Firishta,* II, p. 143; *EI (A&P), 1933-34,* p. 11).

[84] Ibid., *1933-34,* p. 11.

mother and after her to his descendants as long as they bear progeny.[85] A bilingual inscription, in Persian and Marathi, found on the outer face of the mosque (Ahmadnagar), records that Bisat Khan, the most loyal servant of the 'just and perfect king' Nizam Shah, had endowed land of the *bagh* as *inam* for the light (*chiragh*) of the mosque and dome.[86]All these three inscriptions contain a curse that whoever contravenes this injunction will be subjected to condemnation (*la'anat*) by God, the Prophet, angels and men.[87] However, the trusteeships of the *waqf* gardens were assigned to the family members which would then remain in the family through generations.

Our sources reveal that gardens were frequently donated to the Sufi Saints and endowed (*waqf)* to shrine.[88] Syed Zain-ul Abidin, son of the famous Sufi Saint Hazrat Qutub of Ahmadabad, was given a garden and a lake for the upkeep of the shrine.[89] Besides, documents record the grant of gardens as *madad-i ma'ash*, free from levies, to the religious persons in lieu of their services and support to the State.[90]

Conclusively, garden was not merely a physical site but also served as 'cultural institution'. The raised *chabutra* or pavilion, sometimes roofed and sometimes opened, was made especially for the purpose of enjoy the conversation with learned men, friends and ladies; to enjoy music, dance and *huqqa*; to play games; and to listen, recite and compose poetry etc., while sitting on the beautiful carpet. It could be said that garden was a place with a 'life'. However, the functions and meanings of the gardens in Mughal India were varied and multiple. All types of social activities were experienced there. Consequently, garden emerged as the place for cultural interactions.

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[85] Ibid., *1955-56,* pp. 83-84.
[86] Ibid., *1939-40,* p. 30.
[87] Ibid., *1933-34,* p. 11; *1955-56,* p. 84.
[88] *Waqiat-i Kashmir,* p. 229; *Mirat-ul Haqaiq,* f. 191b.
[89] Ibid., f. 173a.
[90] Accession Nos. 303, 1836, 2136, 2166, NAI , New Delhi, (Vide CAD, I, S. Nos.118, 346; II, S. Nos.215, 218); Tirmizi, *Mughal Documents,* II, pp. 50, 73.

Chapter: IV

Mughal gardens: A Paradisaically Intense Political Space

Gardens have generally been considered as worldly paradise but at the same time they were the manifestation of political ascendancy and power. Garden in Mughal India was conceived not merely as an 'image of paradise' or simply a 'place of pleasure', rather as a centre of multi-faceted activities. Thus, now there is a need to move beyond the traditional notion of '*chaharbagh'* or garden design to the 'after life'[1] of the gardens and incorporate it into political arena. It has been rightly observed that 'the garden is conceived as cultural space, an aesthetic form which unites the visual with the olfactory and auditory senses, a political arena where both rituals of power unfold and control of resources and a site of memory preserved'.[2]

The role played by the gardens in the life of Muslims, in general, and for the Mughals, in particular, appears to stem from the concept of the 'ideal garden' of Paradise as portrayed in the *Quran*.[3] It has been discussed, repeatedly, in the *Quran* that whosoever will do the righteous deeds and make God happy, will be rewarded the 'Garden of Paradise' (*Jannat-ul Firdaus*), 'Garden of Eternity' (*Jannat-ul Adnin*) and the 'Garden of Bliss' (*Jannat-un Naim*) etc., bellow which rivers flow. [4] Thus, the *Quranic* description of the garden of Paradise indicates the lawn interspersed with winding streams, trees bowed down with fruits, a place for comfort, and the pavilions occupied by the virgins, waiting to enter the elect.[5] It is worth noting that there is no mention of flowers but the abundance of fruit trees. Many features of the Mughal gardens resemble with the garden of the Paradise such as pavilion or *baradari*, fountains and trees of fruits etc. It is believed that octagon pools, frequently found in Mughal gardens, symbolize the eight divisions of Paradise.[6] Thus, the Mughal gardens emblemize the garden of Paradise.

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[1] The term 'afterlife' of a garden, indicates the experiences of garden by the users and visitors, given by John Dixon Hunt on the basis of the investigation of the literary and visual responses. See Daud Ali, *Gardens and Landscape*, p. 5.
[2] Ibid., p. XX.
[3] *Quran*, 2:25, 2:82, 20:76.
[4] Ibid., 2:25; 2:82, 2:221, 2:265, 3:133, 3:185, 3:195, 3:198, 4:57, 5:65, 7:42, 9:21, 9:72, 9:100, 9:111, 9:100, 10:23 11:108, 13:35, 15:45, 18:30-18:31, 18:41, 19:61, 19:63, 20:76, 22:14, 22:23, 22:56, 26:85, 26:90, 26:91, 35:33, 8:49, 38:50, 39:73, 39:74, 40:8, 41:30, 42:22, 46:14, 47:12, 47:15, 48:5, 48:17, 50:31, 51:15, 54:54, 56:89, 57:12, 57:21, 61:12, 64:9, 65:11, 68:34, 70:34-70:35, 71:12, 81:13-81:14, 85:11, 98:8.
[5] Ibid.
[6] For details, see Annemarie Schimmel, 'The celestial Garden in Islam', in MacDougall and Ettinghausen (eds.) *The Islamic Garden.*

Numerous inscriptions, inspired by *Quranic* gardens, tried to compare gardens with the Paradise. One finds myriad inscriptions of gardens, though rarely from the imperial gardens, from the whole of Mughal India which directly compare the gardens to the Paradise. An epigraph (dated 1627 AD) found on the wall of the octagonal tank of the Vernag garden of Kashmir built by the emperor Jahangir, compared the beautiful waterfall (*abshar*) and the stream of the garden with the stream of the Paradise (*ju-i Bahisht*).[7] Another inscription of the garden of Zebun Nisa at Lahore (1641 AD) records that the garden was laid out on the pattern of Paradise.[8] Likewise Bagh-i-Husam of Bidar has been mentioned as refreshing as Paradise.[9] Ekdilabad on account of its flourishing garden (dated 1629-32 AD) with blooming cypress trees and orchards has been termed as the second Paradise (*khuld-i-sani*) on earth.[10] Furthermore the garden of Amner (Vidarba) built by Husain (dated 1692 AD);[11] Rahat Bakhsh garden (Ahmadnagar) built by Jahangir Khan (dated 1692-93 AD);[12] Lal Bagh at Cambay built by Baqir Khan, (dated 1695-96 AD);[13] the garden of Ajmer built by Danish at the instance of Syed Abdullah (dated 1703 AD);[14] and the garden of Mahaldar Khan of Delhi built during the reign of Muhammad Shah (dated 1710-11 AD)[15] have inscriptions which, someway or other, try to compare them with Paradise.[16] Besides, some other gardens like Gulabi Bagh of Lahore built by Mirza Sultan Beg (*Mir Bahr)* under Shah Jahan (dated 1655 AD);[17]garden of Qandhar by Husain during the reign of Aurangzeb (dated 1684 AD);[18] and the Namdar Bagh of

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[7] The said epigraph was noted during my visit to the garden in August, 2014. The epigraph finds textual support from *Tuzuk*, tr., I, p. 92; II, pp. 130, 173; Also, Sadaf Fatma, 'Gardens in Mughal India', op.cit., p. 297.

[8] Latif, *Lahore*, pp. 188-90.

[9] *EI (A&P), 1987,* p. 25.

[10] Ibid., *1967*, p. 45, Fuhrer, *The Monumental Antiquities and Inscriptions in the North Western Provinces and Audh,* (Allahabad, 1891), p. 92; Sadaf Fatma, 'Gardens in Mughal India', op.cit., pp. 297-8.

[11] *Annual Reports of Indian Epigraphy* (*ARIE*), *1964*-65, No. D, 121; *Annual Report of Archaeological Survey of India* (*ARASI*), *1926*-27, pp. 39-40; *EI (A&P), 1967,* p. 68

[12] Ibid., *1955-56*, p. 104.

[13] Commissariat, *A History of Gujarat*, II, p. 191.

[14] *EI (A&P), 1959-60,* p. 46.

[15] Zafar Hasan, *Monuments*, II, p. 270; *Asar-us Sanadid*, I, p. 238; Nath, *Monuments of Delhi,* p. 68; Fanshawe, *Delhi Past and Present,* p. 61.

[16] *EI (A&P),* p. 68; *1955-56*, p.104; *1959-60*, p. 46; *ARIE*, *1964-65*, NO. D, 121; *ARASI*, *1926-27*, pp. 39-40; Commissariat, *A History of Gujarat,* II, p. 191; Zafar Hasan, *Monuments*, II, p. 270; *Asar-us Sanadid,* I, p. 238; Nath, *Monuments of Delhi*, pp. 68; Fanshaw, *Delhi Past and Present*, p. 61; Also, Sadaf Fatma, 'Gardens in Mughal India', op.cit., pp. 297-304.

[17] Latif, *Lahore*, p. 134.

[18] *EI (A&P), 1919-20*, p. 23.

Ellichpur built by General Namdar Khan Bahadur Panni (dated 1813 AD)[19] have been claimed to be as beautiful as the gardens of Kashmir on earth and the garden of Paradise (*Iram*).[20] In poetical way, sometimes the epigraphs exaggerated the beauty of the gardens and proclaimed that its flowers must be praised even by the gardener of Paradise.[21]

However, perhaps one of the reasons behind making resemblance of the Mughal garden with the Paradise garden was also because of the extreme beauty of the gardens. An inscriptional description of the beauty of garden, found at Qandhar Fort (dated 1684 AD), mentions that one Muhammad laid out a garden like ‘a picture (*tasvir*)’ and that the sight of the garden has such bright effect that it turns the black collyrium (*surma*) of the eyes into ‘divine light’ (*nur*)’.[22] Another worldly metaphoric portrayal of the beauty of a garden is described in the inscription of Gulabi Bgah of Lahore which narrates that ‘the garden is so beautiful that the poppy (*lala)* is marked with the spot (*dagh)* and the flower of the Sun and moon serve to adorn it as lamp (*chiragh*)’.[23] Thus, gardens were compared, in beauty, not only with the gardens of Paradise but with other worldly things of natural beauty too.

Following the epigraphic perception, Persian chronicles also depicted the Mughal gardens like that of the garden of Paradise. Salih Kambuh while praising the Hayat Bakhsh garden of Lal Qila remarks that ‘Hayat Bakhsh garden is the model of the garden of Iram’ and goes on to say in a poetic way that after seeing the Paradise-like scene (*firdaus-i manzar*) of the fort and its gardens, the laudable voices of everyone and everything echoed from the earth to sky that ‘if there is any Paradise on earth, it is here, it is here, it is here!’[24]. Sujan Rai Bhandari, the author of *Khulasat-ut Tawarikh,* depicts the same picture and records that the ‘reservoirs of water, lofty

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[19] *EI (A&P), 1975*, p. 64; *ARIE, 1959-60,* NO.D, 82, 83; Also, Sadaf Fatma, ‘Gardens in Mughal India’, op.cit., pp. 297-304.

[20] *EI (A&P), 1919-20,* p. 23; *1955-56,* p.104; 1*975*, p. 64; *ARIE, 1959-60,* NO.D, 82, 83.

[21] Zafar Hasan, *Monuments*, III, p. 98, *Asar-us Sanadid*, I, p. 171; Nath, *Monuments of Delhi,* pp. 68-69.

[22] *EI (A&P), 1919-20,* p. 23.

[23] Latif, *Lahore*, p. 134. Sadaf Fatma, ‘Gardens in Mughal India’, op.cit., p. 298. The word ‘spot’ alludes to the black center of the poppy flower.

[24] Salih Kambuh, *Amal-i Salih,* III, pp. 36, 51.

fountains, gardens of eternal spring, trees loaded with fruits reminds one of the land of Paradise.'[25]

However, commenting upon the paradisiacal form of the Mughal gardens, James Wescoat rightly remarks that Mughal gardens expressed a 'denotation but not connotation of Islamic Paradise and they achieved the form, but not the meaning of paradise gardens.'[26] Thus, practically the Mughals wanted to create a metaphor of paradise and not the real paradise. Ralph Blakstad criticized the stereotype notion of Paradise that 'Paradise garden is an allegorical description for a psychic state and garden as a physical fact is not a Paradise.'[27] Aesthetically, Mughal gardens were created with the pictorial imagery of *Quranic* paradise but their philosophical intention had pragmatic goals related to the profane world.

Apart from its conceptual metaphysical aspect, the royal Mughal gardens may be viewed as symbol of royalty, reflection of kingship and territorial control.[28] Although Babur, the initiator of Mughal gardens in India, named his first garden as Hasht Bahisht (the garden of eight Paradise), in his writing there is no reference of paradisiac overtones.[29] In real sense Babur's gardens reflect the territorial quest and beyond that it was for him a metaphor of his ability to govern.[30] In *Baburnama,* after taking Kabul in 1504 AD and Hindustan in 1526 AD, he never mentions his quest for making mosques or *Madrasa* but copiously records the detail of the construction of new gardens. It explains his imperial, administrative and cultural ethos.

There happens to be a direct co-relation between the building of grand gardens and territorial and geographical expansion, be it Timur in Samarqand; Shah Abbas in Isfahan; or Akbar in Hindustan. When Babur annexed Kabul, in the very first year of

[25] Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., pp. 3-4. Furthermore, he composed a beautiful couplet in praise of the garden of Lal Qila:

> 'Every spot of its soil is like Paradise;
> In every place there is a garden.
> Its flower beds are so pleasant, that one may say
> That its lanes are the streets of Paradise
> Its air is heart attracting and heart captivating.'

[26] Wescoat, 'From the Gardens of the Qur`an to the Gardens of Lahore', in *Landscape Research,* (1995), 20 (1), pp. 19-25.

[27] Ralph Blakstad, 'What is an Islamic Garden, op.cit, p. 22.

[28] Walcher, 'Between Paradise and Political Capital', op.cit., p. 345.

[29] Catherine, 'Babur and the Timurid *Char Bagh*', op.cit., p. 47.

[30] Ebba Koch, 'My Garden is Hindustan, op.cit., p. 161; Catherine, 'Babur and the Timurid *Char Bagh,* op.cit. p. 53; Idem, *Architecture of Mughal,* pp. 24-25.

his conquest, he built the famous garden of Nimla in 1504 AD (which was later restored by Jahangir), and laid out the most cherished *chaharbagh*, Bagh-i Wafa in 1508-09 AD.[31] After annexing Hindustan, the first and foremost thing done by him was laying out a garden. Negating the climatic condition, Babur created favourable political atmosphere by constructing gardens at the conquered places, especially at Agra, as he wanted to expand the territory. Akbar, after the annexation of Kashmir, renewed the territorial aspect of making gardens. Kashmir, on account of its environment and beauty, provided the best place to build gardens. Kashmir, as a whole, was like a 'private garden' (*bagh-i Khasa*) to Akbar as described by Abul Fazl and Badauni both.[32] Jahangir also said that Kashmir is a garden of eternal spring.[33] This shift has been described by Wescoat very aptly that 'this continued a permanent shift in the geographic center of Mughal garden design, away from the Jamuna river corridor and back to its origin in Kabul and to its locus of future development in Kashmir'.[34] Innumerable gardens were built by the Mughal nobles in Kashmir who attempted to bring Kashmiri garden style to the plains of the North also.[35]

Thus, the synthesis of garden design with territorial expansion and geographic science exemplified by *Baburnama* had not been forgotten. It was continued by his successors Akbar, Jahangir, Shah Jahan and other regional rulers more intensely. The author of *Amal-i Salih* tries to equalize Shah Jahan's period of prosperity with imagery garden. He writes 'Hindustan has gradually become the rose garden of the earth and his (Shah Jahan's) reign which is the cradle of prosperity has become the spring season of the age in which the days and nights are young'.[36] Earlier the emperor Akbar was often compared with garden imagery. The prayer for the prosperity of his reign was made with garden as symbol. It goes on to explain that the gardens of the emperor's kingdom be evergreen and flourish by the canals of the God; fountains of the king's mercy and generosity might continue with evergreen

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[31] *Baburnama*, p. 83; Stephens Dale, *The Gardens of Eight Paradises: Babur and Culture of Empire in Central Asia, Afghanistan and India (1483-1530)* (Boston, 2004), p.184; *Tuzuk*, tr., I, p. 125.

[32] *Ain*, II, p. 169; Badauni, *Muntakhab-ut Tawarikh*, ed., Maulvi Ahmad Ali, (Calcutta, 1864-1869), II, pp. 369.

[33] *Tuzuk*, p. 299.

[34] Wescoat, 'Mughal gardens and Geographic Science', op. cit., pp. 190, 192. Wescoat has explained that in this changing relation between garden and territoriality in the sixteenth century, four related themes came out: (i) Akbar's ambivalence towards Babur's legacy (ii) New models of design to serve an expanding imperial vision (iii) Advances in geographic sciences associated with territorial administration, and (iv) A geographic shift of Mughal garden culture to Kashmir.

[35] *Tarikh-i Hasan*, pp. 293-321, *Tuzuk*, pp. 299-327.

[36] Salih Kambuh, *Amal-i Salih* , III, p. 24.

freshness; the tree of the king's grandeur and brilliance and fruit of exalted good luck may continue to flourish by the constant irrigations of God's grace.[37] The well-ordered gardens of Lahore, the riverfront gardens of Agra, Ahmadabad and mountainous gardens in Kashmir, etc. became a symbol of the well-ordered territory of the great Mughals and their nobles.

Gardens served the ground for royal ceremonies, such as coronations, enthronement and encampment. The Mughal emperors Akbar and Aurangzeb were crowned in the gardens. The tradition was, obviously, followed from their ancestors. Even Babur's coronation took place in a garden.[38] Akbar began his kingship from the garden of Kalanaur (Punjab) in 1556 AD, where his enthronement took place with the approval of Bairam Khan.[39] Even before the coronation, as a young child, during the time of his father Humayun's exile, Akbar stayed in the gardens with female companions.[40] In the same garden, once Jahangir halted and remembered his father's coronation.[41] The later successor Aurangzeb also ascended the throne in the garden of Aizzabad, also known as Shalamar Garden, in Delhi in 1657 AD with the title of *Alamgir*, 'the seizer of the universe'.[42] Following the Mughal foot-steps, many Hindu chiefs held their coronation ceremony in their gardens. The coronation ceremony of Raja Chet Singh was held in the garden of Shish Mahal, in the suburb of Kamachcha, South-west of the town Banaras in the year 1770 AD, which was a *chaharbagh* purely in laid out in Mughal style.[43]

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[37] Arif Qandhari, *Tarikh-i Akbari,* pp. 41-2, 47, 90.
[38] Neeru Mishra, *The Garden Tomb,* p. 103.
[39] *Akbarnama,* II, pp. 3-4, *Muntakhab,* II, p. 8. Badauni informs that 'the emperor of the time, the *khalifa* of the age, Akbar *Badshah* with the approval of Bairam Khan, began to honor and adorn the throne of the Sultanate, under the auspicious star, on Friday the second of the month *Rabi-ul Awwal* in the year 963 (AH), in the garden of Kalanaur which to this day, they have not yet finished laying out'.
[40] *Muntakhab,* II, pp. 188-89.
[41] *Tuzuk,* p. 284.
[42] *Masir-ul-Umara,* I (i), pp. 532, 533; III, p. 504; Inayat Khan, *Shahjahanama,* pp. 535, 541, 555. *Masir-ul-Umara* states that Aurangzeb, after the battle with Dara Shikoh, was encamped in the Aizzabad gardens, where he was crowned without any grand ceremony. However, *Shahajahanama* of Inayat Khan, with a slight difference, describes that there was epidemic and heat, thus the fort of Shahjahanabad was becoming oppressive. Aurangzeb decided to leave for the garden of Aizzabad and remained there for one week. By this time, it was decided by Aurangzeb to proclaim himself emperor and the astrologers fixed the auspicious date very hurriedly. In a short time it was not possible to prepare the grand ceremony in the palace of the Shahjahanabad fort, thus the ceremony was held in the Aizzabad garden.
[43] Rotzer and Deokar, 'Mughal Gardens', op. cit., pp. 142, 148-49. The garden was probably built by Raja Balwant Singh who was the Raja of Banaras from 1738 AD to 1770 AD.

Besides coronation or enthronement, the gardens served as the place of grandeur for victory celebrations. The tradition of building gardens to celebrate political victories goes back to Timur's time. Timur built his last garden, known as *Bagh-i Naw,* at Samarqand in 1404 AD when he returned victorious from his long campaign. [44] Babur built a garden, soon after the victory of Kabul, at Nimla in 1504 AD and *Bagh-i Wafa* at Kabul in 1508-09 AD.[45] After his victory over Rana Sanga of Mewar in the Battle of Khanwa in 1527 AD, Babur laid out his garden of victory, *Bagh-i Fatah*, just below the spot. Later, Akbar decided to build his city of victory, Fatehpur Sikri in 1571 after returning from Ajmer as a victor.[46] On the advancement of Babur towards Delhi-Agra heartland, gardens were built by him in Panipat, Dholpur, Gwalior, Agra and Fatehpur Sikri.[47] It is said that Babur ordered to construct symmetrical gardens and orchards in all large cities.[48] On the auspicious occasion of the foundation of the City of Victory at Fatehpur Sikri, Akbar ordered that orchards *(basatins)* and gardens *(baghat)* should be laid out in its 'periphery and centre.'[49] Even before that, in 1564 AD, after annexing Mandu, Akbar ordered to build pleasant dwellings (*imarat-i dilkash*) and life cherishing gardens (*basatin-i jan)* in the Agra region.[50]

The concept of Mughal gardens as symbol of territorial expansion and victory was followed, in toto, by Mughal nobles too. Abdur Rahim Khan-i Kahanan built Fateh Bagh after the victory over Muzaffar III at Sarkhej on the bank of the river Sabarmati in Ahmadabad.[51] Likewise Saif Khan, the *subedar* of Gujarat under Jahangir, laid out a garden and gave it Indian name Jeet Bagh (victory garden) on the other side of the river Sabarmati, opposite of Fateh Bagh, to commemorate the victory over Prince Khurram's (Shah Jahan) rebellion.[52] The court chronicler of Ibrahim Adil Shah II, Muhammad Qasim Firishta, tells us that even much before that, in 1490 AD,

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[44] Lisa Golombek, 'The Gardens of Timur', in *Muqarnas,* XII, p. 140.
[45] *Baburnama,* p. 83.
[46] Ibid., p. 226; *Akbarnama,* II, p. 365; Qandhari, *Tarikh-i Akbari,* p. 185; Moynihan, 'The Lotus Garden Palace', op.cit., p. 137; Nadeem Rizavi, 'Exploring the Mughal', op.cit., pp. 894-95. Akbar gave the name Fatehpur Sikri, after returning from Ajmer in 1571 AD, to his newly built city, inspired by the name of the Bagh-i Fatah of Babur in the same village of Sikri.
[47] *Baburnama,* pp. 224-26; Catherine, 'Babur and the Timurid *Char Bagh',* op.cit., p. 53.
[48] Zain Khan, *Tabqat-i Baburi,* tr., Askari, (New Delhi, 1982), p. 156.
[49] Qandhari, *Tarikh-i Akbari,* P. 185; *Akbarnama,* II, p. 365.
[50] *Akbarnama,* II, p. 236.
[51] *Tuzuk,* p. 214 ; *Mirat,* I. pp. 154-55; (Suppl), p. 22 ; Mandelslo, p. 47.
[52] *Mirat* (Suppl), p. 23; I, pp.195-96 ; Mandelslo, p. 44; Also see, Sadaf Fatma. 'Constructional Activity', op.cit., p. 234.

rebellious Bahmani noble Ahmad Nizam-al Mulk Bahri routed the Sultan's army and laid out a garden to celebrate the victory at the site of the battle and became independent ruler with the name Ahmad Nizam Shah.[53] The battle was known as *jang-i bagh* (war of garden). Four years later when Ahmad became strong enough to build a capital city at Ahmadnagar, the royal palace was built in the same garden and the city of Ahmadnagar around it, which was later known as *Bagh-i Nizam*.[54]

The gardens were also used as military base or royal encampment under the Mughals. Babur, during the time of military campaigns, used his gardens as encampment and *carvansarai.*[55] *Bagh-i Jafar*, built by Nawab Jafar, governor of Bihar under Shah Jahan, was actually the camping ground of armies.[56] The gardens of Gujarat were encamped by the Mughal officials during the Maratha disturbances. The Mughal officials, Momin Khan, Jawanmard Khan and Rustam Khan encamped in the Shahi Bagh, Nagina Bagh and in the garden of Amin Khan and Meher Khan, thus entered the city of Ahmadabad only after the settlement of revenue matters with Marathas.[57] The gardens of Mulla Abdul Ghafur, Rustam Manak Parsi and Jahanara's garden at Surat were also encamped by the Mughal officials during the Maratha disturbances.[58] Rustam Ali Khan Bahadur stayed in the garden of Jahanara and later on shifted to the garden of Mulla Abdul Ghafur in 1724 AD to resist Hamid Khan (*naib nazim*) who sided the Marathas.[59] Not only the Mughal officials took shelter in the gardens at the time of political upheaval, but the merchants, traders and other rich peoples, heavily taxed by the State to meet the expense of the army, used to hide (*ruposh*) themselves in the gardens to escape from the oppressive (*zulm*) behavior of *mutasaddi* who were bound to take the tax with tyranny.[60]

In the later days, when Mughal Administration was becoming weak, some gardens were used by the enemies of the Mughals. *Mirat-ul Haqaiq*, a diary written by Itmad Khan, a local official in the eighteenth century, furnishes valuable

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[53] Firishta, *Tarikh-i Firishta,* II, p. 96.
[54] Daud Ali and Emma J. Flatt, 'Introduction', in Daud Ali, ed., *Garden and Landscape,* p. 1.
[55] Cf. Neeru Mishra, *The Garden Tomb,* p. 105.
[56] Askari, 'The City of Patna', op cit, pp. 59-60.
[57] *Mirat-ul-Haqaiq*, ff. 233a, 243a, 291a, 296b; *Mirat*, I, pp. 319, 332; II, p. 158; Also see, Sadaf Fatma, 'Gardens in Mughal Gujarat' op.cit., pp. 441-452.
[58] *Mirat-ul-Haqaiq*, ff. 203b, 283a, 283b, 287a, 296a, 308b, 310a, 346b, 359b, 362a, 380b, 393a, 391a, 399b, 396b, 300a, 301a, 404a.
[59] Ibid., ff. 308b, 310a.
[60] Ibid., ff. 362a, 380b; Also, Sadaf Fatma, 'Gardens in Mughal Gujarat' op.cit., pp. 441-452.

information regarding the political importance of the gardens of Mughal Gujarat. Evidence shows that Nagina Bagh, Shahi Bagh and Shah Bari of Ahmadabad were frequently used by Hamid Khan at the time of the terrible disaster of Gujarat by the Marathas in the eighteenth century.[61] In 1724 AD after killing Shujat Khan, Hamid Khan took shelter in Shahi Bagh with the Marathas and began his preparation for the war.[62] The diary further informs that after ruining (*takht wa taraj*) the area of Shahpur, Hamid Khan left Nagina Bag for Shahi Bag and when Mubariz-ul-Mulk Sarbuland Khan (*nazim*) approached him, Hamid Khan left Shahi Bagh and proceeded towards Shah Bari.[63] Inayat Khan records that when Pratab, a local *raja* in Bihar, was chased by the royal army, he escaped along with his family to the garden built by himself inside the fort of Bhojpur.[64] Evidence avers that generally the rebels used to camp in the gardens. Often, rulers also stayed in the gardens to chase the rebels.[65]

Like encampment and military sieges, the gardens also served as halting place for the rulers since they had deep love of nature. Babur, en-route to Hindustan, halted in the garden of Mirza Kamran where he was given magnificent banquet which lasted for three days.[66] Persian chroniclers furnish myriad references regarding the simple stay while en-route to somewhere as well as military halt of Babur, Humayun, Akbar, Jahangir, Shah Jahan and Aurangzeb in different gardens.[67] The Wah garden, located on the slope of mountains, was utilized by troops as a halting place during Mughal period and in other subsequent reigns.[68] The chronicles have shared numerous experiences and anecdotes related to halting gardens. During his halt in the garden of Shaikh Sikandar at Ahmadabad, Jahangir for the first time plucked figs (*anjeer)* with his own hands which gave him a relinquished experience.[69] The emperor did the same during his halt in Fateh Bagh also and was astonished with the beauty of the artificial

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[61] *Mirat-ul-Haqaiq*, ff. 245a, 247a, 310b, 340a, 345b, 371a, b, 374b, 375b, 391b, 446a, 469a; *Mirat*, II, pp. 62, 77, 86, 133, 157-8, 164; Also, Sadaf Fatma, 'Gardens in Mughal Gujarat' op.cit., pp .441-452.
[62] *Mirat-ul-Haqaiq*, ff. 310b, 469a; *Mirat*, II, p. 62 ; See also, Sadaf Fatma, 'Gardens in Mughal Gujarat' op.cit., pp. 441-452.
[63] *Mirat-ul-Haqaiq*, ff. 371a, b, 374b, 375a, b.
[64] Inayat Khan, *Shahjahanama*, p. 210.
[65] *Akbarnama*, II, p. 281.
[66] Ahmad Yadgar, *Tarikh-i Salatin Afghan,* in Elliot and Dowson*, history of India as told by its own Historians*, (Delhi, 1964), V, p. 40.
[67] *Baburnama*, pp. 148, 157, 160; *Akbarnama*, III, pp. 346, 468; *Tuzuk*, pp. 43, 113, 166, 268, 283, 284, 322, 338; *Masir-ul Umara*,I (i), p. 532; Inayat Khan, *Shahjahanama,* pp. 323, 475, Salih Kambuh, *Amal-i Salih,* I (i), p. 169; II, p. 325; III, p. 120.
[68] Makin Khan , 'An Introduction to the Historical', op.cit., p. 471.
[69] *Tuzuk,* p. 211.

flowers and fruits, created by the daughter of the owner of the garden.[70] *Mirat* records very interesting anecdote of the event that during his Gujarat visit in 1617 AD, Emperor Jahangir was requested by Khairunnisa Begum, daughter of Abdur Rahim Khan-i-Khanan, who built the garden on the victory over Muzaffar III, for a feast in the same garden. The request was acceded by His Majesty. Since it was autumn (*mausam-i Khizan)*, all trees were barren and the garden plants were leafless from top to bottom. Skillful artists and workmen were employed, by the chaste lady, who decorated the leaves and flowers of every tree with paper of variegated colours; and fruits, such as orange, lemons, apple, pomegranate and peach etc. made out of wax with the same shape were fixed on respective trees. Similarly, various anemones, basils and colourful flowers of different hues and fragrances were embellished with leaves and branches of paper. When the emperor entered in this bloomed and delightful garden, he forgot that it is autumn and extended his hand spontaneously to pluck a fruit and pick a flower and became much pleased after the acquaintance of the reality. Consequently, she was given presents and ennobled with an edition of her *jagir*.[71] During stay, sometimes nobles and ladies of the *harem* were honored and sometimes emperors were given *nazarana* and *peshkash* in the garden.[72]

Besides the Mughal officials, other dignitaries also used to stay in the gardens. The author of *Mirat-ul Haqaiq* provides interesting information that in 1724 AD Begum Sahab, aunt of Itmaduddaula Qamruddin Khan, stayed in the garden of the chief merchant (*umdat-ul tujjar*) Abdul Ghafur, en-route to Makka from Agra to perform Haj.[73] It appears from the reference that at the time of the Haj pilgrims, perhaps, dignitaries used to stay in this garden of Abdul Ghafur which was situated on the way outside the city of Surat.

Politically encircled gardens in Mughal India became a pleasing abode for foreign envoys and travelers also. In a painting, by Ram Das, Babur has been depicted as receiving Persian (Safavid), Uzbeks and Rajput envoys in his favorite garden at Agra in 1528 AD where, as usual, robes of honor, gold & silver and richly worked swords and daggers were presented to the guests (**Plate: XLIV**) which also finds

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[70] Ibid., p. 214; *Mirat,* I, pp. 193-4.
[71] Ibid., pp. 193-4.
[72] *Tuzuk,* pp. 237, 274, 284; tr., p. 48; Inayat Khan, *Shahjahanama,* pp. 246, 249; *Masir-ul-Umara*, III, p. 272; Commissariat, *History of Gujarat,* II, p. 249.
[73] *Mirat-ul Haqaiq*, ff. 325 (b), 326(a); Also, Sadaf Fatma, 'Gardens in Mughal Gujarat' op.cit., p. 447.

support from *Baburnama.*[74] In 1638 AD, the garden of Sirhind was dignified with the presence of Mulla Abdul Ghafur, the envoy from Balkh, in the auspicious presence of Shah Jahan where he was presented a robe of honour, a horse and Rs. 5000.[75] *Mirat-ul Haqaiq* informs that when Rustam Ali Khan, governor of Gujarat, was staying in the garden of Rustamji Parsi at Surat in 1724 AD, an envoy Mir Murtaza from Iran came in the garden to meet him and stayed there for two days and two nights.[76] It is said that the same envoy had previously visited the garden of Meher Ali Khan in Ahmadabad in 1718 AD.[77] Later on, Muhammad Karim, Mirza Khalil and Mirza Ahmad, sons of Mirza Ismail, the envoy of Iran, visited Gujarat and stayed in the garden near Bariao Gate of Surat.[78] Thus, gardens, at the time of Mughals, were frequently used by the foreign envoys even in the regional kingdoms also. Amin Bagh at Hydrabad, built by a Qutubshahi noble Amin Khan, an advisor of Ibrahim Qutub Shah, in 1568 AD was used as staying place for the Safavid embassy of Iran during the reign of Qutub Shahis.[79] Mandelslo, a foreign traveler, gives a vivid description of the garden of Azam Khan, where he stayed on the invitation of *subedar.*[80] Like Mughal gardens, the gardens of the English and the Dutch also served as hosting place for the factors and travelers.[81]

Administrative functions of gardens have repeatedly been mentioned by the chroniclers. The Timurid gardens had been the centers of administrative activities. On similar lines, Shalamar gardens of Kashmir and Lahore served the purpose of upholding administrative meetings. The architectural remains of *diwan-i-khas* and *diwan-i- aam* in these gardens are the existing proofs. The black slab in Shalamar of Kashmir and white slab in the Shalamar of Lahore indicate the seat of emperor, where emperor used to sit for the meeting. There was a Mehtabi Chabutra in the Aam Khas Bagh of Sirhind, raised by Shah Jahan in the center of the garden, where he used to

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[74] *Baburnama,* Eng. tr., p.631.
[75] Inayat Khan, *Shahjahanama,* p. 249.
[76] *Mirat-ul-Haqaiq*, f. 298a; Also, Sadaf Fatma, 'Gardens in Mughal Gujarat' op.cit*.,* p. 447.
[77] *Mirat,* II, p. 18.
[78] *Mirat-ul-Haqaiq,* f. 403b. Perhaps the said garden was of Mulla Abdul Ghafur, situated on Bariao gate. Dairy mentions that they went to the garden of Khwaja (*dar-i bagh-i Khwaja*) near Bariao.
[79] Hakim Nizamuddin Ahmad Gilani, *Hadiqat-as Salatin,* (Hydrabad, 1961), p. 119, as cited in Ali Akbar Hussain, *Scent in the Islamic,* p. 31; Daud Ali, *Gardens and Landscape,* p. 103.
[80] Mandelslo, p. 32.
[81] Ovington, p. 232-33; Peter Mindy, II, p. 26; *EFI, 1655-1660,* pp. 141. 197; Pietro Della Valle, I. 39-40; Travernier, I, p. 207; K.P. Padmabha, *History of Kerala,* p. 212.

enjoy the beauty of moonlight and also used to hold his court there in the open.[82] Paintings depict the scene of gardens where court was held by the emperors. Babar has been shown in a painting, holding court with his secretary flanked by two weapon bearers in the garden (**Plate: XXXV**). Another painting of late sixteenth century, found in Freer Gallery of Art, shows Babur sitting in a garden pavilion with his attendants and courtiers and listening attentively to something which was read before him (**Plate: XLV**). An illustration of *Ikhlaq-i Nasiri* shows Akbar engaged in administrative activities in the pavilion of a garden (**Plate: XXXIV**). Manohar Das (1604 AD) sketched a painting in which Akbar has been shown listening to a courtier in a garden pavilion from a high kiosk (**Plate: XLVI**). Even gardens provided place to hold large assemblies of common people too.[83]

Not only emperors, but nobles also used to hold assemblies in their gardens. *Masir-i Rahimi* informs that Abdur Rahim Khan-i Khanan, the then viceroy of Deccan, used to hold assemblies in his garden at Burhanpur. [84] A painting shows Abdullah Khan Uzbek, governor of Mandu under Akbar, holding court in a garden pavilion with courtiers and servants.[85] (**Plate: XLVII**). Lalbagh garden at Dhaka was also used for administrative purposes.[86]

Justice was dispensed and rebellious or captured were brought in the courts arranged in gardens. A painting by Manohar shows that rebellious Khusrau was brought before Jahangir in 1606 AD in the garden of Mirza Kamran at Lahore. The young prince standing on the bottom left corner shows every sign of shame with villain Hussain Beg on his right and Abd-ur Rahim on left in the skin of an ox and an ass as a punishment (**Plate: XLVIII**). This painting finds support from the memoir of Jahangir that, in 1605-6 AD, Khusrau was brought before Jahangir in Mirza Kamran's garden with his hands tied and chains on his legs. They made Husain Beg sit on his right hand and Abd-ur Rahim on his left. Khusrau stood weeping and trembling between them.[87] Finally, they were punished by the imperial judgement. Jahangir ordered these two villains (Hussain Beg & Abd-ur Rahim) to be put in the skins of an

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[82] Subhash Parihar, *Mughal Monuments,* p. 11.
[83] Wescoat, 'Garden verses Citadel: The Territorial context of Early Mughal Gardens', in J.N. Hunt (ed.), *Garden History: issues, Approaches, Methods,* (Washington D.C., 1992), p. 175.
[84] *Masir-i Rahimi,* II, pp. 598-600.
[85] J.M. Rogers, *Mughal Miniatures,* (British Museum Press, 1931), p. 30.
[86] Catherine, *Architecture of Mughal,* pp. 284-85.
[87] *Tuzuk,* p. 32.

ox (*gau*) and an ass (*khar*), and that they should be mounted on asses with their faces to the tail'.[88] Another incident of royal judgement was pronounced in the Mandakar garden near Agra in 1609 AD. Kaukab, son of Qamar khan, who made his other cousins Sharif and Abdul Latif partners in crime, became intimate with a *sanyasi*, who was 'blasphemous and impious'. Thereupon, Kaukab and Sharif, after whipping, were imprisoned and 'Abd-ul Latif was given a hundred lashes on the order of Jahangir. [89] Taking the cue from the Mughals, Rajput rulers also used their gardens as court for passing judgement. Maharana of Udaipur, who completed his palace and hanging garden in 1669 AD, regularly summoned nobles of his court in the garden where he administered justice.[90]

Thus, the Paradise symbol of Mughal gardens was often being accompanied and sometimes displayed by political, military and diplomatic usage. It was certainly a paradise in the sense that 'emperor's creation was above all and wondrous'. The quadripartite structure of Shahjahanabad itself denotes the hierarchical order, showing the position of the world and the emperor within it. The gardens were the symbol of efficiently administered territory, an emblem to show the triumph of the ruler by hoisting ceremonies like coronation and victory celebrations, and a halting place for the officials, dignitaries, foreign envoys and sometimes even for the enemies to hide themselves. Above all, the gardens in Mughal India, served as a political administrative space for holding court and dispensing justice etc.

[88] Ibid.

[89] *Tuzuk*, pp. 80-8. Percy Brown has perhaps become confused and has related the painting of Khusrau's punishment in the garden of Mirza Kamran in Lahore to the incident of the punishment of Kaukab in the garden of Mandakar near Agra and bluntly compares Hussain beg and Abd-ur Rahim with Sharif and Abd-ul Latif. But, definitely it was about the incident of Kamran's garden, as two men can be seen clearly, on either side of the main culprit (that is Khusrau), in the skin of ox and ass. See, Percy Brown, *Indian painting under the Mughals*, (New Delhi, 1981), p. 137; Barbara Scmitz & Z. Desai, *Mughal and Persian Paintings and Illustrated Manuscripts in Raza Library, Rampur,* (New Delhi, 2006), Plate No. 5.

[90] Jan Pieper 'Hanging gardens in the Princely Capitals, op.cit., p. 559.

Chapter: V

Mughal Gardens: A Horticultural Study

The gardens in Mughal India created a natural environment and provided exotic fruits, flowers, herbs, trees and vegetables. The system and arrangement of plantation in the gardens can only be better gauged by the surviving paintings and literary sources. Undoubtedly, besides water as a decorative feature of gardens, the real ornaments of gardens were flowers and trees. Existing sources provide information about different kinds of plants of fruits and flowers and, above all, various technologies to produce the distinctive botanical environment. Indeed, the pleasure gardens cannot be understood adequately without knowing its horticulture. Although the standard Mughal works, like *Ain* are almost silent on gardens, fortunately they have systematically described their fruits and flowers in various seasons and in particular regions. The scientific pollen analysis of the soil of Mughal gardens is under process to ascertain the family of the plants grown in the gardens. Though such analysis reveals the vegetation of that time, to some extent, yet again it will not be accurate in ascertaining a particular plant grown in a particular garden since in course of time the soil has been mixed with layers of other soils carried by the winds over ages and other kind of contaminations.[1] Therefore, Persian chronicles, traveler's accounts and paintings are the only better source through which we can get the idea of plantation in the gardens.

The tradition of planting a garden, in India, goes back to ancient times. It is said that temples were often equipped with their own gardens and gardeners to produce flowers and fruits for the daily use of worship.[2] This tradition of flowery temple gardens, though informal, had traveled with Buddhism from India to the Far-East in Chinese and then Japanese gardens.[3] In fact, the only similarity between the Japanese gardens and the gardens in Mughal India is that both show the love of plantation and nature. Ancient treatises mention different kinds of Indian trees and plants, planted in the gardens, which have been meticulously described by Babur who also furnished a list of Indian fruits and flowers.[4] It further sheds light upon the love and liking of flowers by Indians similar to

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[1] Neeru Mishra, *The Garden Tomb*, pp. 116-17.
[2] Sylvia Crowe et.al., p. 42; Moynihan, *Paradise as a Garden*, p. 89; Daud Ali, *Garden and landscape*, p.43. Daud Ali has described in detail the botanical aspects of the gardens of Ancient and early Medieval India.
[3] Sylvia Crowe et.al., p. 42
[4] *Baburnama*, pp.198-202.

that of Persians.[5] The foremost ruler of Delhi Sultanate, Firozshah Tughlaq has been credited for building innumerable gardens, embellished with fruits and flowers.[6] Afif provides information that in each garden of Firozshah Tughlaq, there were variety of trees and plants including sugarcane, palm, date, orange, seven kinds of grapes and beautiful red flower trees.[7] Notwithstanding, the Mughals can indisputably be credited to layout water oriented and formal geometrically planned gardens which led to the increase of vegetation in the gardens due to extension of irrigational facilities and their love for nature.

Under the great Mughals, horticulture became one of the major sources of income both for the State and the society. There were gardens and groves to meet the horticultural experiments. The Mughals exempted the cultivation of fruits from taxation, from time to time, just to encourage horticulture. This tradition of tax exemption on garden products had been introduced by the founder of the empire, Zahiruddin Mohammad Babur. There is an emotional reference in *Humayunama* that Babur literally wept after seeing the fruit of Kabul, sent to him while he was in India.[8] It shows his love for fruits, in general, and of nature, in particular. Babur has been mentioned as planter of trees by his daughter Gulbadan.[9] He himself planted grapes in the Hasht Bihisht garden at Agra.[10] Thus, for Babur, laying out garden was not only for pleasure and to create natural shade to avoid Indian hot climate, rather it was also his zeal to get exotic fruits and flowers of his native place as well as of Hindustan. Though Akbar was not much interested in garden building like his grandfather Babur and son Jahangir, he was keenly interested in horticulture. The contemporary court account *Ain-i Akbari* furnishes that Akbar considered fruits as one of the greatest gifts of the Creator, and paid much attention to them. Therefore, during his reign, horticulturists from Iran and Turan migrated to India and gave impetus to the cultivation of trees.[11] The emperor himself planted several plants including pineapple in the garden of Gulafshan.[12] He even

[5] Sylvia Crowe et.al., p. 42; Moynihan, *Paradise as a Garden*, p.89
[6] Afif, *Tarikh-i Firozshahi*, pp. 127, 295; *Tabqat-i Akabari*, p. 121
[7] Afif, *Tarikh-i Firozshahi*, p. 295.
[8] *Humayunama*, tr., p. 8
[9] Ibid., p. 22.
[10] *Baburnama*, p. 245
[11] *Ain*, I, p. 43.
[12] Neeru Mishra, *The Garden Tomb*, p. 116

procured gardeners from Persia to cultivate grapes and melons in the gardens of Lahore.[13] Jahangir was a real lover of nature which can be better gauged in the exhaustive description of nature in his autobiography. He has been variously witnessed of plucking fruits from the garden trees of Fateh Bagh at Ahmadabad and Ishrat Afza garden of Kashmir etc.[14] After him, it became a regular practice to plant fruit trees in the gardens. Shah Jahan, as reported by Lahori, planted the first tiny chinar and poplar by himself in the Shalamar garden of Lahore.[15] He was not only an enthusiastic planter but a natural lover of fruits and flowers. It is said that he used to pluck and gather the fruits by his own hands. Shah Jahan often used to go to the garden of fortress early in the morning to gather the fruits in the company of his favourite nobles.[16] However, during the time of Akbar, Jahangir and Shah Jahan, gardening and planting were like a craze. Even Aurangzeb, who is not known to have been much interested in garden building, had shown his interest in planting of tress as he wrote to his son to be very careful in planting trees.[17] The Mughal rulers were so obsessed with fruits, flowers and trees that severe punishments were inflicted on the culprits who damaged the plants; even influential persons of the courts were not spared from the harsh punishments.[18] Orders were also passed from time to time to increase the verdancy and fertility of the trees and plants with Royal assistance.[19] Thus, the Emperors and aristocracy both made great efforts to grow almost every variety of fruits in their gardens.[20]

The travelers' accounts have divided the gardens into four parts by the avenues of cypress along with walkways. First part contained all kinds of fruit trees; second section displayed every kind of flowers and herbs; third part cultivated vegetables of all kinds; while in the fourth part stood the royal palace.[21] Whatever the pattern, the gardens in Mughal India were full of fruit trees, other shady and decorative trees, flowers, herbs and vegetables etc.

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[13] Latif, *Lahore*, p. 32
[14] *Tuzuk*, pp. 211, 306.
[15] Lahori, *Padshahnama*, I (ii), p. 24; Shafi Muhammad, 'The Shalimar Gardens, op.cit., I, p. 60
[16] Manucci, I, p. 199.
[17] Aurangzeb, *Ruqqat-i Alamgiri*, p. 116.
[18] *Tuzuk*, pp. 208, 214; Eng. tr., I, p.432; *Mirat*, I, p. 308; See also, Commissariat, *A History of Gujarat*, II, p. 62.
[19] *Mirat*, I, pp. 305, 337-38; Manucci, II, pp. 315, 316.
[20] Irfan Habib, *Agrarian*, p. 56.
[21] Manrique, II, pp. 183-84; Azhar Ansari, 'Palaces and Gardens, op.cit., p. 72.

Fruit trees in the Mughal gardens:

Ancestral connection of the Mughals with Central Asia and, in some way or the other, with Persia reflected in their deep liking for various kinds of fruits. The beds of fruits and flowers had been created, at least 2-3 ft. below the pathways/walkways, and they were irrigated by water overflowed from the watercourses and pools. In general, the arrangement of trees in the gardens was very systematic. The big trees like mango and chinar etc. were purposely planted in the corners and on the side of the gardens to create shade and sometimes for fencing **(Plates: III, IV, VII, XIX, XXV, XXVIII**, **XXXI**, **XLII, XLIII, XLVIII**). Big juicy trees such as orange and citrons were also planted on the border which again served the purpose of fencing. Pomegranate is frequently shown in the paintings, especially in the gardens of Babur, planted mostly on the wall side of the gardens **(Plates: IV, VI, VII, VIII).** Other important fruit tree in the garden, as depicted in the paintings, is of banana which was mostly planted either in the corner or on the border of the wall in the gardens **(Plates: IV, V, VI, VIII, XXXVIII).** Other fruits like almond and date trees were grouped in the plots. Generally the fruits of different species had not been mixed considering the needed amount of water and care.[22] However, the separate plots for different fruit trees, planted within the garden, were generally known as orchards and groves, such as mango groves, orange groves and apple groves, etc. These trees were replaced by the other trees like plum and apple according to region and climate.[23] The space beneath the fruit trees have been utilized for flower plantations **(Plates: XXVI, XXVII)**.

Evidence based on Persian chronicles and contemporary traveller's accounts tend to classify the varieties of fruits, grown in the gardens, into three categories: sweet fruits, sour or acidic fruits, and dry fruits. The tables further differentiate the fruits grown in different seasons: Summer, winter, spring and rainy seasons with specific reference to their Indian and foreign origin and their botanical names. Tables further highlights a glimpse of regional production of various fruits.

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[22] Moynihan, *Paradise as a Garden,* p. 101.
[23] Villiers Stuart, *Gardens of the Great,* pp. 138-40.

Table I showing sweet fruit trees grown in Mughal gardens and groves

Persian Name	English Name	Botanical Name	Season	Place of origin	Gardens/region
-----	Acacias	*Acacia nilotica*	All Seasons	India	Agra, Sind
Alucha	Plum	*Prunus domestica*	Spring & Summer	Turan	Kashmir
Anannas	Pineapple	*Ananas Sativa*	Winter	India (Portuguese)	Agra, Bengal, Gujarat, Thatta
Anar	Pomegranate	*Punica granatum*	Rainy & Summer	Turan & India	Agra, Gujarat, Kabul, Kashmir, Lahore,
Anbah	Mango	*Magnifera indica*	Rainy & Summer	India	Agra, Awadh, Bengal, Calicut, Cutch, Deccan, Goa, Gujarat, Kamrup, Khandesh, Lahore, Malwa, Thatta
Angur/vine	Grapes	*Vitis vnifera*	Spring & Summer	Turan	Agra, Allahabad, Bihar, Burhanpur, Gujarat, Kabul, Kamrup, Lahore, Malwa
Anjir	Fig	*Ficus carica*	Summer	India	Agra, Bengal, Delhi, Gujarat, Kabul, Lahore, Sind
Ashkin/ Khushkan	Straw-berry	*Fragaria vesca*	——	Badakhshan	Kashmir
Ber	Lote-fruit	*Zizyphus jujube*	Winter	India	Gwalior
Bih/bihi	Quinch	*Cydonia oblonga*	Summer	Turan	Kashmir, Lahore
Chikda	Red jujube	*Elegnus angustifolia*	——	India	India (?)
Gilas/shahalu	Sweet cherry	*Prunus Cerasus*	Summer	Iran & Turan	Kabul, Kashmir
Gular	Clustered fig	*Ficus glomerata*	Summer & Rainy	India	India (?)
Kardi	A special kind of peach	——	——	——	India (?)
Kathal	Jack fruit	*Artocarpus integrifolia*	Summer & Rainy	India	Bihar, Calicut, Goa
Kela	Banana/plantain	*Musa paradisiaca*	All Seasons	India	Agra, Bengal, Calicut, Goa, Mandu, Sind

Kharbuza/ Qawun	Musk-melon	*Cucumis melo*	Summer & Winters	Turan & India	Agra,Allahabad,Calicut, Gujarat, Kashmir, Khishtwar, Konkan, Lahore, Malwa
Khirni	Mimusops	*Mimusops kauki*	Rainy	India	Agra
Khurma/ khajur	Date-palm	*Phoenix dactylifera/ sylvestris*	Summer	Turan & India	Biana, Dholpur, Gujarat, Lahore
Latkan	——	*Eloecarpus*	Always	India	Bengal
Mahua	——	*Bassia latifolia*	Summer	India	India (?)
Naishakar / ukh	Sugarcane	*Saccharum officinarum*	Winter	India	Bihar, Malwa
Nashpati	Pear	*Pyrus communis*	Summer	——	Gujarat, Delhi, Kashmir
Paniyala	——	*Flacourtia cataphracta*	Rainy	India	Gujarat
Sada-phal	Custard apple	*Annona squamosa*	Rain & winter	India	Delhi
Seb	Apple	*Pyrus malus*	Winter	Turan	Agra, Bangash, Gujarat, Kashmir, Lahore
Shaftalu	Peach	*Prunus persica*	Summer	Turan	Delhi, Gujarat, Kashmir, Lahore, Sirhind
Shahtut	Mulberry	*Morus nigra*	Spring	——	Agra, Bengal, Gujarat, Kashmir, Lahore,
Tar/tarkul	Palmyra-palm	*Borassus flabelliformis*	All Seasons	India	Gujarat
Tarbuz	Water-melon	*Citrullus vulgaris*	Rainy	India	Kashmir, Kishtwar
Unnab		*Zizyphus sativa*	Winter	Kashmir	Kashmir
Zardalu	Apricot	*Prunus armenica/ sylvestris*	Summer	——	Kashmir

Sources: *Baburnama; Tarikh-i Rashidi; Ain; Muntakhab-ut Tawarikh; Tuzuk; Iqbalnama-i Jahangiri; Masir-i Jahangiri; Padshahnama; Shajahanama; Masir-ul Umara; Muntakhab-ul Lubab; Amal-i Salih; Khulasat; Tarikh-i Dilkusha; Adab-i Alamgiri; Mirat; Mirat-ul Haqaiq; Waqiat-i Kashmir; Tarikh-i Hasan; Early Travels; Bernier; Mandelslo; Manrique; Manucci; Peter Mundy; Pietro Della Valle; Thevenot; Tomas best; Orlich; Varthema; Scent in the Islamic; Sylvia Crowe; M.A. Alvi & A. Rahman, Jahangir-The Naturalist, (N. Delhi, 1989)*; *Mehdi Khansari.*

Table II showing sour fruit trees grown in Mughal gardens and groves

Persian Name	**English Name**	**Botanical Name**	**Season**	**Place of origin**	**Gardens/region**
Alu balu	Sour cherry	——	——	Kashmir	Kashmir
Amal-bid	Citron	*Citrus medica/ acida*	Rainy	India	——
Amla/awla	Myrobalan	*Phyllanthus emblica*	Summer	India	Bengal
Amrd-phal	Sans. Amrit phal (Citron)	*Citrus aurantium*	Summer	India	India (?)
Anbli/ imli	Tamarind	*Tamarindus indica*	Summer	India	Agra, Bengal, Gujarat, Sind
Badhal	Monkey-jack	*Artocarpus lakoocha*	Summer	India	Bihar
Gal gal	Kind of Citron	*Citrus limonum*	Rainy	India	India (?)
Jaman	——	*Eugenia jambolana*	Summer & Rainy	India	India (?)
Janbiri	Lime	*Citrus medica limonum*	——	India	India (?)
Kamrakh	Star fruit	*Averrhoa carambola*	Winter	India	India (?)
Karaunda	Korinda	*Carissa carandus*	Rainy	India	India (?)
Limu	Lime/Lemon	*Citrus llimun*	Rainy & Summer	Indian	Bengal, Gujarat, Lahore
Naranj/ kawla?	Orange	*Citrus aurantium*	Winter	Bajaur, Sawad, India	Agra, Aurangabad, Bengal, Gujarat,,Kabul, Kishtwar, Lahore, Lucknow, Sind
Sangtara	A kind of orange	*Citrus decumana*	Winter	India	Bengal, Nagor, Sylhet
Turunj	A kind of orange	*Citrus*	Winter	Bajaur, India	Gujarat, Kishtwar

Sources*: Baburnama; Tarikh-i Rashidi; Ain; Tuzuk; Iqbalnama-i Jahangiri; Masir-i Jahangiri; Padshahnama; Amal-i Salih; Khulasat; Adab-i alamgiri; Mirat; Tarikh-i Hasan; Early Travels; Bernier; Mandelslo; Peter Mundy; Pietro Della Valle; Orlich; Scent in the Islamic; Sylvia Crowe; Jahangir-The Naturalist; The Persian Gardens.*

Table III showing dry fruit trees grown in Mughal gardens and groves

Persian Name	**English Name**	**Botanical Name**	**Season**	**Place of origin**	**Gardens/region**
Akhrot	Walnut	*Juglans regia*	Summer	Turan	Kashmir
Badam	Almond	*Prunus amygdalus*	Summer	Turan	Gujarat, Kashmir, Lahore
	Cashew nut	*Anacardium occidentalis*	——	——	Aurangabad, Surat
Chilghoza	Nut	*Pinus gerardiana*	Summer	Turan	Lahore
Chiraunji	Dry fruit	*Buchanania latifolia*	Summer	India	India (?)
Girdgan	Hazel nut	*Corylus avellana*	——	——	India (?)
Khubani	Dried apricot	*Prunus armenica*	Summer	Turan	Kashmir
Nargil/nariyal/ Jaws	Coconut palm	*Cocos nucifera*	Winter	India & Turan	Agra, Bengal, Calicut, Gujarat,Lahore,
Pista	Pistachio	*Pistachio vera*	——	Turan	Kashmir, Saharanpur

Sources*: Ain; Tuzuk; Iqbalnama-i Jahangiri; Masir-i Jahangiri; Padshahnama; Masir-ul Umara; Amal-i Salih; Khulasat; Tarikh-i Hasan; Early Travels; Bernier; Mandelslo; Manucci; Peter Mundy; Pietro Della Valle; Thevenot; Varthema; Scent in the Islamic; Sylvia Crowe; Jahangir-The Naturalist; The Persian Gardens.*

The above mentioned tables makes it clear that fruits of both kinds, of Indian origin as well as imported ones, had been successfully grown in the Mughal gardens. The gardeners were much particular in locating the region which had its favourable environmental impact on foreign plants. Thus the plants imported from Turan and Central

Asia were mostly planted in Kashmir. Babur and Abul Fazl have furnished list of fruits trees of Indian origin as well as of imported trees grown in India. Babur have listed twenty seven Indian fruits which includes mango, plantain (banana), tamarind, *Mahua*, mimusop, *Jamun*, *kamrak,* jack-fruit, monkey-jack, Lote-fruit, *karaunda, paniyala*, Clustered fig, myrobalan tree, *chiraunji,* date-palm, coco-nut palm, Palmyra-palm (*tar),* orange (*naranj*), citron (turanj), *sangtara*, *gal-gal*, *jambiri* lime, Custard apple, *amrd-phal*, lemon and Amal-bid, with their description and characteristics, positive as well as negative.[24] Abul Fazl has also furnished a list of fruit trees, cultivated in Hindustan and Turan, with their season and prices.[25] He categorizes the fruits of Hindustan as sweet fruits (*mewa-i shirin-i Hind*), dried fruits (*mewa-i khushki),* sour fruits (*mewa-i tursh)* and fruits somewhat acidic (sour) (*mewa-i mai-khush)*.[26] Certainly, the above mentioned fruits had also been grown in gardens and in simple orchards. Apart from gardens, Mangoes were usually planted in groves in systematic rows which were sometimes owned by the member of aristocracy and other rich people and sometimes even by the peasants.[27] Peter Mundy has seen many groves of mangoes around Kara (Allahabad) planted in rank and measure.[28] There were numerous groves of mangoes and other fruits in Gujarat. At the distance of 100 *kos*, from Pattan to Baroda, there were groves of mangoes yielding ripe and sweet fruits.[29] Mango was considered by Babur as the best fruit of Hindustan and in characteristics he compared it with *kardi* peaches, a fruit of his native land.[30] He was so obsessed with the mangoes of India that he prayed 'O God! If the government of Hindustan is destined to be given to me, let these productions of Hind be brought presently before me, i.e. betel leaves and mangoes, and I shall accept them as omen'.[31] Amir Khusrau called mango as *naghzak* and described it as the fairest fruit of

[24] *Baburnama,* pp. 198-202.
[25] *Ain,* I, pp. 44-53.
[26] Ibid., pp. 45-48.
[27] Irfan Habib, *Agrarian,* pp.53-4. Mango trees were planted in orchards (*bustan)* at a distance of 23 *gaz* from each other.
[28] Peter Mundy, II, p. 97.
[29] *Ain*, II, p. 114.
[30] *Baburnama,* p.198.
[31] Ahmad Yadgar, *Tarikh-i Salatin Afghan,* op.cit., V, p. 24.

Hindustan (*naghzaktarin mewa-i Hindustan*).[32] It was also the favourite of Jahangir who says in *Tuzuk* that 'of all fruits, I am very fond of mangoes'.[33]

Mughals not only liked indigenous trees but introduced some important trees in India imported from Iran and Central Asia. Apparently, it was Babur who started import and export of trees.[34] Even before annexing Hindustan proper, just after taking Lahore and Dipalpur, he sent bananas and sugarcane for the plantation in the garden of *Bagh-i Wafa* at Kabul and even sent sugarcane to Badakshan.[35] Likewise, he brought some of the best musk-melon plant from Kabul and grape plant from Balkh to plant in the garden of Agra.[36] For this, he himself writes that 'to have grapes and melons grown in this way in Hindustan filled my measure of content.'[37] Jahangir praised his forefathers and informs that a fruit like melon which was not grown in India was introduced by Babur and had become as good as of Iran and Turan.[38] A honeydew variety of the melon was introduced during the reign of Shah Jahan by Muhammad Raza of Khurasan.[39] Good quality of water-melon was grown in the gardens of Delhi by imported seeds.[40] Thus, melons had been a nostalgic fruit for the Mughals since it connected them with their ancestral lands.

Consequently, Mughal gardens provided space for experiments since the excellent fruits, of both hot as well as cold climate, were planted successfully.[41] It was from the time of Akbar that the process of the import of trees became more common as Jahangir informs that 'in the reign of my father (*arsh ashyani),* many fruits of other countries (*mewaha-i wilayat*) which till then were not to be had in India, were obtained there (Agra)'.[42] Specifically, sweet cherries of Kabul were introduced in Kashmir during Akbar's reign.[43] Varieties of the grapes of Samarqand, like *sahibi* and *habshi*, became common in several towns of Hindustan.[44] In the garden of Jahangir's favourite noble

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[32] *Baburnama*, p.198; Eng. tr., p. 503 n.
[33] *Tuzuk*, p. 3.
[34] *Baburnama*, p. 607.
[35] Ibid., p. 83; Also see, Stephens Dale, *The Gardens of Eight Paradises*, p. 310.
[36] *Baburnama*, pp. 83, 245.
[37] Ibid., p. 245.
[38] *Tuzuk*, p. 3.
[39] Hamida Khatoon, *Urbanisation*, p. 43.
[40] Bernier, p. 250.
[41] *Tuzuk*, p.283; *Masir-ul Umara*, III, p. 381.
[42] *Tuzuk*, p. 3.
[43] Ibid., p. 300; *Masir-i Jahangiri*, p. 299; *Muntakhab-ul Lubab*, I (i), p.303; *Waqiat-i Kashmir*, p. 225.
[44] *Baburnama*, p. 30; *Tuzuk*, p. 3.

Muqarrab Khan at Kairana near Saharanpur, every kind of tree belonging to a warm or cold climate was found. Of fruit-bearing trees of Persia (*wilayat*), Jahangir saw pistachio (*pista*) trees and cypresses (*sarw)* in graceful form (*khush-qad*).[45] Not only emperors and their nobles, but other 'great and wealthy people' like merchants also planted fruit trees in their gardens with imported seed from Persia.[46] But the success was restricted to the imperial gardens and the orchard of the nobility where besides special irrigation facilities their cultivation was supervised by the Central Asian gardeners.[47]

Besides Central Asia and Persia, fruit trees were also imported from 'New World' through Portuguese. Pineapple (*anannas)* was the most prominent among them which was brought by Portuguese from European ports.[48] In the beginning, it was on the western coast of Portuguese possessions but by the end of the sixteenth century became common in Bengal, Gujarat and Baglana.[49] It was spread throughout the length and breadth of the country very rapidly.[50] At the time of Jahangir, good quantity of pineapple was produced in the Gulafshan garden and other gardens of Agra which belonged to private domains (*khassa-i sharifa*).[51] It became so common that it was unhesitatingly included in the list of Indian fruits by Abul Fazl and later by Peter Mundy.[52]

Portuguese introduced other fruits like papaya and cashew-nuts from Brazil or New Spain. [53] Thevenot had noticed the trees of cashew-nut along the route from Surat to Aurangabad.[54] Grafted mangoes, especially Alfonso, for the first time in India, were also introduced by the Portuguese at the port of Goa.[55]

The seeds of the best kinds of fruits were brought not only from *wilayat* (Persia and Central Asia) but from the other parts of Hindustan by the emperors and high nobles to their gardens. The seeds of mangoes were brought in the garden of Kairana from

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[45] Ibid., p. 283.
[46] Pelsaert, p. 48; Bernier, p. 250.
[47] Irfan Habib, *Agrarian,* p. 56.
[48] *Tuzuk,* pp. 3, 173.
[49] *Ain,* II, p. 116; Pietro Della Valle, I, pp. 134-35, Bernier, p. 438; Manucci, III, p. 183; See also, Irfan Habib, *Agrarian,* p. 55.
[50] Ibid., pp. 55-56.
[51] *Tuzuk,* pp. 3, 173.
[52] *Ain,* I, pp. 45, 48; Peter Mundy, II, p.309. Abul Fazl informs that pineapple was also known as *kathal-i safari* (travelling jackfruits) because its plant could be put into a vessel, taken on travel and could yield fruits. (*Ain*, I, p. 48).
[53] Pietro Della Valle, I, pp. 134-35; Irfan Habib, *Agrarian*, p. 55.
[54] Thevenot, p. 102.
[55] Manucci, II, p. 169; III, p. 180; Irfan Habib, *Agrarian,* p. 55.

Gujarat and Deccan, famous for that[56]. The various and best kinds of fruits produced in the *khanabaghs* of *umaras* in the suburb of Delhi were served at the table of the rulers.[57]

Besides the fruit trees and plants, fruits were also imported for royal use from Iran and Central Asia. Fruits and dry fruits such as melons, apples, pears, grapes, almonds, pistachios, plums, apricots and raisins were purchased from Samarqand, Bukhara and Persia at a very high price.[58] *Ain* also informs that since the conquest of Kabul, Qandhar and Kashmir, loads of fruits were imported, thus the markets and stores of the dealers were full of fruits throughout the year.[59] In the months, when fruits used to be out of season in Hindustan, the fruits like musk-melon and grapes were obtained from Kabul, and Badakhshan. Traders brought melons, pears and apples from Samarqand.[60] Pomegranate of Yazd, which was celebrated throughout the World, melons of Kariz, which were of best kind, grapes from Samarqand and Badakhshan and apples from Samarqand and Kabul, imported in abundance for Jahangir's personal use. Jahangir himself informs that although every year he had pomegranate from Kabul and melons from Badakhshan, there was no comparison with the Yazd pomegranate and Kariz melons.[61] It seems that these fruits were introduced during the reign of Jahangir since he himself lamented that such fruits had not come from Persia in the victorious time of his revered father who had great liking of fruits especially melons, pomegranate and grapes.[62] The figs of Ahmadabad were presented to Jahangir when he was camped at village Jalot.[63]

Climate and soil played a great role in plantation of fruit trees both in the gardens, native as well as imported. The main reason behind the abundance of fruit trees and other shady trees in the garden of Muqarrab Khan, from *wilayat* (Persia and Central Asia) like cypress and pistachio and indigenous like mangoes brought from Deccan and Gujarat, was its good climate (*khush ab-o hawa*) and fertile soil (*shaistagi zamin*) as told by the

[56] *Masir-ul Umara*, III, p. 381.
[57] Rotzer and Deokar, 'Mughal Gardens', op. cit., p. 138.
[58] Bernier, pp. 203-04.
[59] *Ain*, I, p. 43.
[60] Ibid., pp. 43-44.
[61] *Tuzuk*, pp. 132, 173.
[62] Ibid.
[63] Ibid, p. 204.

emperor Jahangir himself and later on by Shah Nawaz Khan.[64] Climatic role for the abundance of fruits and flowers may be gauged from Abul Fazl's account when he mentions that Allahabad, Sorath in Gujarat and Lahore produced abundance of fruits, flowers and garden herbs due to its favourable climate (*sazgar ab-o hawa*).[65] Different climate and soil played a pivotal role in production of different kinds of fruit in Mughal India. Best kinds of mangoes, oranges (*sangtarah*) and grapes had been produced in Bengal, Kamrup and Sylhet region,[66] while Bihar and Orissa were famous for its jack-fruits (*kathal*) and *badhal.*[67] *Subas* of Allahabad and Agra were famous for Melons, mangoes, grapes and betel leaves.[68]Abul Fazl compares the melons and grapes of Agra with that of Persia and Transoxiana.[69] Malwa produced special varieties of mangoes, melons and grapes.[70] The climate of Burhanpur was favourable for grapes which were even transported to different places as gifts and presents.[71] Ahmadnagar was producing *fakhri* grapes, though they were not as large as *fakhri* grapes of Kabul but were sweeter than that.[72] Mangoes of Burhanpur were so delicious that they along with the mangoes of Deccan, Gujarat and Malwa, were sent to the imperial fruit-house of Jahangir.[73]

Since the climate of Gujarat was temperate and the soil was sandy, which prevented it from turning into mud in rainy season, it produced many fruits especially mangoes, figs, pineapples, musk-melons, pomegranate, dates, oranges, mulberry, tamarinds, coconut and lemons of good quality.[74] However, grapes were moderate in quantity.[75] Italian traveler Pietro Della Valle witnessed palm trees in the garden of Surat.[76] Excellent quality of figs grew in the gardens of Ahmadabad in plenty.[77]

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[64] Ibid., p. 283; *Iqbalnama-i Jahangiri,* III, p. 557; *Masir-i Jahangiri,* p. 280; *Masir-ul Umara,* III, p. 38.
[65] *Ain,* II, pp. 71, 116, 152.
[66] Ibid., pp. 48, 50; Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., pp. 42-44; J.N. Das Gupta, *Bengal in the Sixteenth century,* (Calcutta, 1914), p. 16.
[67] *Ain,* II, pp. 51, 62; Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 38.
[68] *Ain,* II, pp. 71, 84; *Tuzuk,* p. 3.
[69] *Ain,* II, p. 84; Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 23.
[70] *Ain,* II, p. 94, *Tuzuk,* pp. 172-73.
[71] U.G. Khobrekar, (ed.), *Tarikh-i Dilkusha,* (Bombay, 1972), p. 6.
[72] *Tuzuk,* p. 177.
[73] *Tuzuk,* Eng. tr., I, p. 377.
[74] *Ain,* II, pp. 114, 116; Badauni, *Muntakhab,* II, p. 366; *Tuzuk,* pp. 215, 245; Mandelslo, pp. 22, 48; Pietro Della Valle, I, pp. 40, 68; Tomas Best, p. 209; The melons of Gujarat were delicious in flavor and taste and available in both the seasons, summer as well as winter. (*Ain,* II, pp. 114; Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 66).
[75] *Ain,* II, p. 114.
[76] Pietro Della Valle, I, p. 40.

Although the figs of Burhanpur were sweet and well-grown, Ahmadabad's figs were sweeter with fewer seeds.[78] It was the garden of Sheikh Sikandar Gujarati at Ahmadabad which produced exceedingly good figs and where, for the first time in his lifetime, Jahangir plucked figs with his own hands which gave a relinquish pleasure to him.[79] In Calicut, the principal fruits were jack-fruits, mangoes, bananas and coconut.[80] In the *Suba* of Delhi, not only Indian fruits and flowers but the fruits of Iran and Turan were grown in abundance.[81]

Lahore's climate was also favourable (*sazgar)* and pleasant. Thus with the royal patronage of Akbar, choicest fruits of Turkistan, Persia and Hindustan were grown there but was famous for musk-melon.[82] Melon and grapes of Lahore were like those of Persia and Turkistan.[83] Oranges of Lahore were also big and colorful.[84] Even Jahangir says that there is much difference in the climate of India but Lahore lies in between Persia and Hindustan which means having the moderate climate. Gardens of Lahore produced sweet and fine flavoured mulberries,[85] apples, pomegranates, peaches, lemons and almonds etc.[86] Variety of fruits were grown in the gardens of Hafiz Rakhna at Sirhind and Nazar Muhammad at Sialkot.[87] Sind produced various kinds of fruits but mangoes were of fine quality.[88] Thatta was famous for seedless pomegranate.[89] The apple of Bangash was of best kind which could not be compared even with *seb-i khub* of Kabul and Samarqand in delicacy and sweetness.[90] Mahabat khan used to send Bangash apples to Jahangir by runners (*dak chauki)*. A dish of that apple was once served to Sayyid Hasan, an

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[77] Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 66.
[78] *Tuzuk,* p. 204.
[79] Ibid., p. 211.
[80] John Winter Johns, (tr.), *The Itinerary of Ludovico Di Varthema of Bologna from 1502-to 1508,* (N.Delhi, 1997), pp. 64-65.
[81] *Ain,* II, p. 134.
[82] Ibid., p. 152. Abul Fazl writes that *kharbuza* grew first in the months of April, May and June, and later crop in June, July and August. He further informs that when the season was over, melons were imported from Kashmir, Kabul and Badakhshan and Turkistan.
[83] Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 110.
[84] Aurangzeb, *Adab-i Alamgiri,* ed. Abdul Ghafur Chaudhri, (Lahore, 1971), I, p. 29.
[85] *Tuzuk,* p. 233.
[86] W. Finch, *Early Travels,* p. 166.
[87] Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., pp. 95-96; *Adab-i Alamgiri,* I, p. 31; W. Finch, *Early Travels,* p. 158.
[88] *Ain,* II, p. 165.
[89] Inayat Khan, *Shahjahanama,* p. 394.
[90] *Tuzuk,* pp. 277-78.

ambassador of Shah Abbas, by Jahangir purposely so that the ambassador might compare it with the apples of Isphahan.[91]

Kashmir enjoyed better facilities for horticulture thus it produced varieties of fruits,[92] such as musk-melons, melons, apples, peaches, pears, cherries, apricots, walnuts etc. of excellent quality.[93] Jahangir praised the quality of apricot of Kashmir and compared it with that of Kabul. The royal narration goes on that there was a tree of apricot in the Shar-ara garden of Kabul, named *Mirzai* which produced the best kind of apricot in whole Kabul but in the imperial gardens of Kashmir, there were many trees like that.[94] Walnuts were more abundant in Kashmir than anywhere else in the world.[95] Pears (*nashpati)* of Kashmir were even better than Kabul or Badakhshan and nearly equal to Samarqand.[96] However grapes were not of finer quality and were harsh (*tursh*) and inferior (*zabun),* but were produced in plenty.[97] Mulberries were not eatable except of some gardens, that too after grafting, but the trees were mainly used for silk worms which were brought from Gilgit and Tibet.[98]

The abundance of fruits, produced in the gardens, needed its conservation. Thus, Ahmadabad and Thaneswar emerged as fruit conservation industry for the purpose of export.[99] The Mughal India applied several methods of conservation. Abul Fazl records that if a ripe mango with its stalk was taken from the tree, and the broken end of the stalk was then covered with warm wax and kept in butter or honey, the fruit will retain its taste for two or three months and the colour for a year even.[100] Citrons, in large quantity, were preserved in Bengal for which Bernier says that there was similarity in the preservation

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[91] Ibid., pp. 277-78.
[92] Sufi, *Kashir,* II, p. 651.
[93] *Ain,* II, p. 170; *Tuzuk,* pp. 299-300, 306; *Masir-i Jahangiri,* p. 299; Lahori, *Padshahnama,* I (ii), p. 30; Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 120; Salih kambuh, *Amal-i Salih,* II, p. 22; Bernier, pp. 397, 413; See also, G.M.D. Sufi, *Kashir,* II, pp. 539, 540, 651.
[94] *Tuzuk*, p. 300; *Masir-i Jahangiri,* p. 299.
[95] Inayat Khan, *Shahjahanama,* p. 127.
[96] *Tuzuk,* p. 300; *Masir-i Jahangiri,* p. 299.
[97] *Ain,* II, p. 170; *Tuzuk,* p. 300; *Ma'asir-i Jahangiri,* p. 300; Lahori, *Padshahnama,* I (ii), p. 30; Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., pp. 120-21.
[98] *Tarikh-i Rashidi,* p. 425; *Ain,* II, pp. 170; *Tuzuk,* p. 300; *Masir-i Jahangiri,* p. 300; Lahori, *Padshahnama,* I (ii), p. 30; Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 121; Hamida Khatoon, *Urbanisation,* p. 46.
[99] Hamida Khatoon, *Urbanisation*, p. 43.
[100] *Ain*, I, p. 49; Also see, Jigar Mohammad, 'Use of Botanical products in India during the 16th & 17th Century', *PIHC,* 57th Session, (1997), p. 331.

between Bengal and Europe.[101] Another way of preservation was in the form of pickles.[102] Conclusively, varieties of trees planted in the Mughal gardens not only produced fruits and provided shade, but also provided wood for multiple purposes and gave scenic value to the towns.[103]

Besides import of seeds and plantation, the 'grafting' was an innovative idea of the Mughals which started in imperial and aristocratic gardens. Grafting had its important consequences for horticulture in general.[104] Evidence suggests that Akbar started grafting in imperial gardens. The graft of sweet cherry (*shahalu*[105]) was introduced in Kashmir in the reign of Akbar by his governor Quli Afshar Khan.[106] But according to Sadiq Khan Mamuri, grafting of fruit trees was first introduced by Jahangir's governor of Kashmir. This is slightly inaccurate, since Jahangir himself informs that it was introduced by Quli Afshar Khan who was the governor of Akbar.[107] The fruits which were inedible previously, became edible through grafting (*paiwandi* or *paiwandkari).* Apricot and mulberry, which were not of a good quality earlier in the valley, were now produced with good taste.[108] Grafting experiment continued by Jahangir who ordered the officials (*mutasaddiyan)* of Kashmir to graft (*paiwand*) the sweet cherries in all the gardens and increased their production.[109] In Nur Afza garden of Kashmir, Jahangir named four grafted trees of cherry as (i) *Shirin-bar* (ii) *Khush-gawar* (iii) *Pur-bar* and (iv) *Kam-bar,* from which 1500 cherries were plucked. [110] One tree of the same in Khurram garden and one in Ishrat Afza garden, after bearing the fruit, was named by Jahangir as *Shahwar* and *Nau-bar* respectively.[111] Lahori reports that in the reign of Jahangir there were only few trees of cherries in the said garden but at the time of Shah Jahan they were numerous.[112]

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[101] Bernier, p. 438.
[102] *Ain*, I, pp. 42, 49; Also see, Jigar Mohammad, 'Use of Botanical products, op.cit., p. 331.
[103] Hamida Khatoon, *Urbanisation,* p. 43.
[104] Irfan Habib, 'Notes on the Economic', op.cit., p. 129.
[105] The name *shahalu* was given by Akbar to *gilas* which was a common name in Persia and Kashmir. *Ain,* I, tr., p. 69; Lahori, *Padshahnama,* I (ii), p. 29.
[106] *Tuzuk*, p. 300; *Masir-i Jahangiri,* p. 299; *Muntakhab-ul Lubab,* I (i), p. 303; *Waqiat-i Kashmir,* p. 225.
[107] *Tuzuk,* p. 300; Cf. Irfan Habib, 'Notes on the Economic', op.cit., p. 129.
[108] *Tuzuk,* p. 300; *Ma'asir-i Jahangir,* p. 51; *Tarikh-i Hasan,* p. 313.
[109] *Tuzuk,* p. 308.
[110] Ibid., pp. 306, 308.
[111] Ibid., p. 306.
[112] Lahori, *Padshahnama,* I, (ii), p. 26; Also see, Ebba Koch, 'Mughal Palace Gardens, op.cit., pp. 147 & n.

He further informs that the same fruit was grafted, in Kashmir, in the reign of Shah Jahan too and became so successful that by 1646-47 AD yielded cherries even superior to Kabul.[113] Contrastingly, Bernier who visited Kashmir in 1656-1658 AD dubbed Kashmir's fruit as inferior because the gardeners did not understand the culture and grafting of fruits.[114] The author of *Muntakhab-ul Lubab*, however, makes us believe that grafting was not only restricted to Kashmir but 'it (*paiwand-kari)* became a common custom (*riwaj*) and within a few years, trees of fresh (*shadab*) and sweet (*shirin*) fruits were planted in so many cities of Hindustan by this technique'.[115]

Initially, grafting system was confined to the Imperial gardens but at the time of Shah Jahan this restriction was lifted so that this innovation could reach to the masses. Consequently, by Shah Jahan's sixteenth regnal year, as has been informed by *Shahjahanama* of Sadiq Khan Mamuri, the citrons, *sangtra*, *konla* and *narangi* were grandly improved.[116] Innovatively, orange (*sangtara)* was obtained by grafting *turanj* on *naranj*.[117] Curiously, mango was not grafted earlier as Khafi Khan informs that although grafting became common practice in so many cities on fresh and sweet fruit trees yet they did not become successful in grafting the trees of mango.[118] Most probably, it was the Portuguese who started the grafting on mango tree on the western coast where Manucci noticed 'alfonso' mango on the coast of Goa.[119] Irfan Habib has noticed that grafted mangoes were reported in the eighteenth century from Bengal only which might have been brought by the Portuguese.[120] Thus, grafting was not confined to the imperial gardens but was experimented on Indian fruits too. The initial restriction was, most probably, to confine the choicest fruits for the imperial establishment only.[121]

Modern scholar Daud Ali, on the basis of the twelfth century manual *Manasollasa,* provides information about grafting and other technologies used in the

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[113] Lahori, *Padshahnama,* I, (ii), pp. 30, 54-55; II (ii), p. 593; *Tuzuk*, p. 306.
[114] Bernier, p. 397.
[115] *Muntakhab-ul Lubab,* I (i), p. 303.
[116] Sadiq Khan Mamuri, *Shahjahanama* , cited by Irfan Habib, 'Notes on the Economic', op.cit., p. 130.
[117] Ibid. Irfan Habib has noticed that Abul Fazl in *Ain* did not list *sangtara,* though *konla* and *narangi* were both listed.
[118] *Muntakhab-ul Lubab,* I (i), p. 303.
[119] Manucci, II, p. 169; III, p. 180.
[120] Irfan Habib, *Agrarian*, p. 55. He explained that in the manuscript of *Nuskha dar Fan-i Falahat* it is mentioned that grafting method was used at Murshidabad on mangoes which itself marks that it was in the eighteenth century. Further the texts mentions that in case of mangoes grafting is possible but not essential.
[121] Irfan Habib, 'Notes on the Economic', op.cit., p. 129.

plants of gardens. According to the information of *Manasollasa*, grafting (*vwaestita*) was used, as early as in 12th century, among series of other techniques. Consequently, grapes were produced from the tree of mango and aubergines from the pumpkin plants.[122] It is worth mentioning that various techniques were also used on flower plants to introduce different shades of flowers. It has been explained that the application of honey to immature plants resulted into the blooming of red flower while the same with ghee resulted into white flower and by binding together with the application of both honey and ghee, the plant produced both white and red flowers.[123] The eighteenth century work *Risala-i Baghbani*, written at Golkunda, records different techniques of gardening.[124] Thus Irfan Habib rightly remarks that it is hard to ascertain whether grafting was a new practice in India or only a case of new experiments on old principle.[125] The other sources written in Iran, such as *Kitab-al Filaha, Khazan-o Bahar* and *Risala-i Falahat* extend much information about the various types of successful experiments and techniques on plants.[126] But, unfortunately, Mughal chroniclers are almost silent on techniques and experiments related to the gardens and horticulture.

For decorative purpose, tall and shady trees have been planted in the gardens on the border of the *khiyaban* (raised brick walkways) and water channels, on regular intervals, which increased the beauty of the causeways. The decorative trees included cypress, chinar, pine, poplar, pipal, banyan, nim, arghawan etc.[127] In the gardens of Kashmir, the *Khiyabans* were bordered mainly by Chinar and poplar trees on both

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[122] Daud Ali, *Garden and Landscape*, pp. 45, 50.
[123] Ibid., p. 45.
[124] Ali Akbar, *Scent in the Islamic*, p. 60.
[125] Irfan Habib, *Agrarian*, p. 56.
[126] Ali Akbar, *Scent in the Islamic*, pp. 54-65. The chapter eight of *Kitab-al Filaha* deals with the practice of grafting and budding. It extensively describes the grafting system and reference has also been made to Nabatean, Greek and Byzantine practices. It is said that 'root graft is Greek Method (*tarkib-i Unani*), 'bark graft' is Roman (*tarkib-i Rumi)* or Byzantine and 'side graft' is Nabatean (*tarkib-i Nabti*). Other concepts like 'cleft' and 'crown' grafts (*aqlam*), the benefits of grafting, the season and the crops on which grafting could be successful and above all, preparation for grafting has fully been explained. Likewise, the 14 and 15 folios of *Khazan-o Bahar* discusses grafting, its methods and benefits. The author informs about the graft of pera and orange on the mulberry for a flush or red on the fruit, grafting of orange on pomegranate for blood-red oranges and grafting peaches on willow for seedless peaches. Besides, the grafting of figs on mulberry, apple on pear, peach on plum, apricot on almond, and vine on apple, have been recommended in *Risala-i Falahat*, written in Persia.
[127] Moynihan, *Paradise as a Garden*, pp. 101, 102' Villiers Stuart, *Gardens of the Great*, p. 142; Subash Parihar, *History and Architectural*, p. 198; Muhammad Istiyaq Khan, *Shalamar: The Glory that was;* Azhar Ansari, 'Palaces and Gardens, op.cit., p. 65; Rotzer and Deokar, 'Mughal Gardens', op. cit., p. 144.

sides.[128] The huge trees like Chinar and other were planted on the corner and side of the gardens to give shade and sometimes for fencing purposes **(Plates: VII, IX, XXIV, XXXII**, **XXXV**, **XLVIII**). The large Indian trees like tamarind and Banyan found place in the gardens alongwith the Central Asian trees such as chinar and cypress.[129] Arrangement of trees from border fencing to central tank was based on height and shady outlook of the trees. Thus, it is worth noting that generally the gardens had huge trees like chinar or mango etc. in its center near the raised platform of masonry or grass to provide the shade to the space needed for the social gatherings[130] **(Plates: VI, XXVII, XXVIII, XXXV, XXXII, XXXIII, XLV, XLIX).** References clearly indicate chinars were planted on both banks of the stream in the middle of the gardens for pleasant shade.[131] A painting of the *chaharbagh* garden of Kashmir depicts the arrangements of chinars on the bank of the water channel and on the border of the beds **(Plate: XLVIX).** The trees like cypress, cycamore and arghawan were solely intended for decorative purposes.[132] It is depicted in the Mughal paintings that cypresses in the gardens were systematically arranged on both the sides of *khiyaban*, bordering the wall, around the tanks and pavilions, sometimes in pairs, and sometimes on four corners of the tank **(Plates: I, III, IV, V, IX, XXIV, XXV, XXVII, XXIX, XXXI, XLI, XLV, XLIX**).

The following table given the names of the decorative and shady trees in Persian/Hindi, English with their botanical names, of cold as well as hot climate, indigenous as well as imported with their growing seasons, and particular regions of plantations based on information provided by Persian chronicles and contemporary travelers accounts.

Table IV showing shady and decorative trees in the Mughal gardens

Persian Name	**English Name**	**Botanical Name**	**Season**	**Place of origin**	**Gardens/region**
Anbah	Mango	*Magnifera indica*	Rain & Summer	India	Agra, Awadh, Bengal, Calicut,

[128] Azhar Ansari, 'Palaces and Gardens, op.cit., pp. 65, 70.
[129] Orlich, *Travels in India*, III, p. 25.
[130] Villiers Stuart, *Gardens of the Great*, pp. 15, 68.
[131] *Baburnama*, pp. 86-7.
[132] Azhar Ansari, 'Palaces and Gardens, op.cit., p. 72.

					Cutch, Deccan, Goa, Gujarat, Kamrup, Khandesh, Lahore, Malwa, Thatta
Arghawan	Judas tree	*Cercis siliquastrum*	All seasons	Turan	India (?)
	Banyan	*Ficus Bengalensis*	All seasons	India	Agra, Delhi, Gujarat
Bid Mula	Willow	*Salix babolonica/ alba*	All seasons	Turan	Agra
Bilut	Holm-oak	*Quecus ilex/incana*	All seasons		Kabul
Chinar	Plane tree	*Platanus orientalis*	All seasons	Iran & Kashmir	Kabul, Kashmir, Lahore
-----	Nim	*Azadirachta indica*	All seasons	India	Bengal
-----	Pipal	*Ficus religiosa*	All seasons	India	Agra
Safedar	Poplar	*Populus alba*	All seasons	Iran & Turan	Agra, Kashmir
Sanobar	Pine	*Pinus pinea*	All seasons	Iran & Turan	Agra, Kashmir
Sarw	Cypress	*Cupressus Sempervirens*	All seasons	Iran & Turan	Agra, Delhi, Kabul, Kashmir, Lahore, Mandu, Sirhind, Saharanpur,

***Sources**: Ain; Tuzuk, Iqbalnama-i Jahangiri; Padshahnama; Masir-i Jahangiri;Amal-i Salih; Mirat; Tarikh-i Hasan; Early Travels; Bernier; Mandelslo; Manrique; Peter Mundy; Pietro Della Valle; Orlich; Scent in the Islamic; Jahangir-The Naturalist;The Persian Gardens.*

Table IV explicitly indicates the import of decorative and shady trees from Central Asia and Persia to plant in the gardens of Mughal India. The trees such as cypress (*sarw*), pine (*sanobar*), plane (*chinar)* and the white poplar (*safedar*) etc. were never planted earlier in Hindustan but by the time of the Mughals they were in plenty even in the gardens of Agra.[133] The most fond of tree in its height and outlook was cypress which decorated, as paintings show, not only the gardens of Kabul, Kashmir and Lahore but

[133] *Tuzuk,* p. 3.

was found eastward in the gardens of Sirhind, Saharanpur, Delhi, Agra and Mandu also. In the gardens of Sirhind and Kairana (Saharanpur), there were innumerable cypress trees. When Jahangir went to the garden of Muqarrab Khan at Kairana, after seeing so many cypresses, he ordered to count them which were tabulated three hundred (300).[134] Cypress is believed to have come from Syria, Asia Minor (Turkey) and Iran.[135] However, Chinar and poplar trees have been described by Jahangir as the ancient trees of Kashmir.[136] Thus, the belief of Archibald Constable that it was introduced by Ali Mardan Khan in 1632 AD does not seem tenable.[137] The Kashmiri term '*bawayn'* for chinar itself is a strong testimony of its being indigenous which was in existence much before the Mughal ruler Jahangir.[138] Undoubtedly, this tree was being popularized, especially for garden decoration, by the Mughals. Nasim Bagh was cultivated completely as Chinar Grove.[139] In the Shahr-ara garden of Kabul, there were two chinar trees in the middle of the garden to which Jahangir had given the name *Farah Bakhsh* (joy giver) and *Saya Bakhsh* (shade giver). He gave an order that in between both the trees, a slab of white stone should be set-up bearing a genealogical inscription right from the name of his ancestor Timur upto his own time.[140] The paintings depicts chinar trees only in the gardens of Kabul, Kashmir and Lahore. **(Plates: VI, XXVII, XXVIII, XLV**)

Apart from providing shades and beauty, these huge trees must have been planted for the retention of humidity and to save the soil from evaporation. In Persia, chinars were planted on both sides of *qanats* to reduce the evaporation of the open channels.[141]

Flowers in Mughal gardens:

Generally, the gardeners created flowerbeds in open space beneath the fruit trees **(Plates: XXVII, XXVIII)** but later on flower beds had also been planted with a single variety in the plots which created mosaic-like effects and sometimes bordered the

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[134] Ibid., p. 283.
[135] Neeru Mishra, *The Garden Tomb*, p. 117.
[136] *Tuzuk*, p. 313.
[137] Sylvia Crowe et.al, p. 49.
[138] Sufi, *Kashir*, I, p. 252.
[139] Ibid., II, p. 651.
[140] *Tuzuk*, pp. 51-52.
[141] Neeru Mishra, *The Garden Tomb*, p. 95.

pathways and fruit trees[142] **(Plates: V, XXV, XLII, XLIII).** Flowers created central theme of the gardens both as aesthetic and scenic. Thus flower plants were systematically planted around the tank/pool and pavilion for beautification as well as to fragrant the air **(Plates: I, III, IV, V, IX, XXVII, XXXVIII).** Although flower plants were in abundance in the garden, yer flower pots were also arranged to create more scenic effect **(Plate: IV).** Villiers Stuart has drawn an image of the arrangement of flowerbeds in the garden of Taj Mahal and Shalamar of Lahore in which she lucidly shows how the flowerbeds were systematically intersected by lemon, orange and cypress trees on the stone parterre and brick parterre respectively **(Plan: IV).**

Below is the a table of flower plants of cold as well as hot climate, indigenous as well as imported, their season and region, mostly grown in the gardens and groves with their Persian, English and Botanical names.

Table V showing variety of flowers that bloomed in the Mughal gardens

Persian Name	**English Name**	**Botanical Name**	**Season**	**Place of origin**	**Gardens/region**
Banafshan	Violet	*Viola odorata*	Summer	India, Iran & Turan	Delhi, Gujarat, Kashmir
Champa	——	*Michellia champaca*	All seasons	India	Bengal, Berar, Gujarat
Chaltah	——	*Dillenia indica*	All seasons	India	India (?)
Dhak	*Palas* in Hindi	*Butea frondosa*	Summer	India	Bengal, Deccan, Kabul
Dhanantar	——	*Clitoria ternatea*	Rains	India	India (?)

[142] Moynihan, *Paradise as a Garden*, pp. 101, 126-27.

Dupahriya	——	*Pentapetes phoenicea*	All seasons	India	India (?)
Gudhal/jasun	——	*Hibiscus rosasinensis*	Summer	India	India (?)
Gulal	——	*Ocimum basilicum*	Spring	India	India (?)
Gul-i Aftab	Sunflower	*Helianthus annuus*	Summer	India	Kashmir
Gul-i Hinna	——	*Lawsonia inermis*	All seasons	India, W&C Asia	Kashmir
Gul-i Malti	——	*Aganosma dichotoma*	Summer & Rainy	India	India (?)
Gul-i Surkh/Gulab	Rose	*Rosa damascena*	Winter	Iran & Turan	Agra, Delhi, Gujarat, Pinjaur, Kabul, Kashmir, Lahore, Patiala, Sind, Sirhind
Gul-i Za'fran	Saffron	*Crocus sativus*	Autumn & Rainy	India, Kashmir	Kashmir
Ja'fari	——	*Linum trigynum*	Spring	India	Agra, Gujarat, Kashmir, Lahore
Jait	A water plant	*Sebania aegyptica*	Rainy	Indian	India (?)
Juhi	——	*Jasminum auriculatum*	Rainy	India	India (?)
Kadam	——	*Nauclea cadamba*	Rainy	India	India (?)
Kaner	Oleander	*Nerium odorum*	Summer	India	Agra, Gwalior, Kairana
Kanwal	Lotus	*Nelumbbo nucifera*	Rainy	Asia &Africa	Kashmir
Karil	Caper	*Capparis decidua*	Summer	India	India (?)
Karna	——	*Butea*	Spring	India	India (?)
Kewrah	Screw-pine	*Pandanus odoratissimus*	Summer & Rainy	Inda	Bihar, Deccan, Gujarat, Malwa, Orissa
Khatmi	Marsh Mallow/Shrub Mallow	*Althea officinalis*	Winter	Iran & Turan	Hazara
Kuza	------	*Roza lyelrii*	Summer	India	Punjab

Lahi/Lai	------	*Tamarix sallica*		India	Punjab
Lala	Tulip	*Papaver rhoeas*	Winter	Eorope/ Kashmir	Gujarat, Kabul, Kashmir, Lahore, Sirhind
Lala-i begana	Thal Kawal (Hindi), Padma (Bengali)	*Hibiscus mutabillis*	Rainy	Indian	Bengal, Hazara, Rohtas
Lala-i chaughashi	Red poppy	*Papaver orientale*	——	Kashmir	Kashmir
Lidderposh	——	——	——	Kashmir	Kashmir
——	Marigold	*Calendula officinalis*	Winter	——	Agra, Lahore
Mongra	Munga ?	*Hyperanthera moringa*	Summer	India	India (?)
Muchakand	——	*Jasminum pubescene*	——	India	Bihar
Mulsari	——	*Mimusops elengi*	Rainy	India	India (?)
Nafarman	——	——	——	Iran & Turan	Kashmir
Nag-kesar		*Mesua ferrea*	Spring	India	India (?)
Nargis	Narcissus	*Narcissus poeticus*	Spring	India, Iran & Turan	Delhi, Kashmir, Lahore
Nasrin	Autumn Narcissus	*Narcissus elegans*	Autumn	Iran & Turan	Kashmir, Punjab
Nilofar (Kumudni)	Water lily	*Nymphaea nauchali*	Rainy	——	Gujarat, Kashmir, Malwa
Niwari	——	*Jasminum elongatum*	Spring	India	India (?)
Padal	Brownish liliac	*Stereospermum suaveolens*	Spring	India	India (?)
Phak	——	——	——	Kashmir	India (?)
Qalgha	——	——	——	Iran & Turan	India (?)
Rai-bel	——	*Jasminum zambac*	Summer& Rainy	India	India (?)
Ra'na	——	——	——	Iran & Turan	Kashmir
Ratan Manjani	A climbing plant	——	All seasons	India	India (?)

——	Lily	*Lilium candidum*	——	——	Delhi, Kashmir, Lahore
Sausan	Iris	*Iris ensula*	Winter	Iran&Turan	Delhi, Kashmir, Lahore
Senbal	Silk cotton	*Bombax cieba*	Spring & Summer	India	India (?)
Sewti/Ketki	Dog-rose	*Rosa brunonii/ glandulifera*	Always	India	Deccan, Gujarat, Orissa
Shabbu	Tuberose	——	——	——	India (?)
Shaqaiq	Anemone	*Anemone*	Winter	Iran & Turan	Gujarat, Kashmir
Singarhar	——	*Nyctanthes arbor tristis*	Summer & Rain	India	India (?)
Siri khandi	A climbing plant	——	Spring	India	India (?)
Sonzard	A climbing plant	——	Spring	India	India (?)
Sumbul	——	——	——	——	Kashmir
Surpan	Alexandria n laurel	*Callophyllum inophyllum*	Rainy	India	India (?)
Taj-i Khurus	——	——	——	Iran & Turan	India (?)
Tasbih gulal	——	——	Winter	India	India (?)
——	White stock	*Mathiola incana*	Winter	——	Lahore
Yasmin/ Chambeli	Jesmin	*Jasminum grandiflorum*	Rainy & Winter	Indian, Iran & Turan	Delhi, Gujarat, Gwaliar Kashmir, Lahore
Yasman-i kabud	Blue jasmine	*Jasminum*	——	Iran &Turan	Kashmir
Zeba	——	——	——	Iran & Turan	India (?)

Sources*: Baburnama; Ain; Tuzuk; Iqbalnama-i Jahangiri; Masir-i Jahangiri; Padshahnama; Shajahanama; Amal-i Salih; Khulasat; Adab-i alamgiri; Mirat; Waqiat-i Kashmir; Tarikh-i Hasan; Early Travels; Bernier; Manucci; Peter Mundy; Pietro Della Valle; Orlich; Scent in the Islamic; Sylvia Crowe; Jahangir-The Naturalist; The Persian Gardens.*

Like fruits, flower plantation was a characteristic feature of the Mughal gardens. From indigenous perspective, plantation of fruit trees was not so common in India before

the Mughals but planting of flowers was very common on account of the demand of flowers in temples and prayers. The list of indigenous flowers with their characteristics has been recorded by Babur which includes *Jasun, Kaner* (oleander), *keora* (screw-pine) and *champa* (jasmine).[143] Jahangir's list of Indian flowers is more elaborate with *Champa, chambeli, kewra, rae-bel, mulsari and ketki.*[144] The Emperor further eulogises the Indian flowers as the best kinds of which could not be compared in the whole Univerese in their fragrance (*khushbu*).[145] However, the Mughals convincingly boosted the existing tradition of planting flowers in a more systematic and methodological way. The remaining gap was further fulfilled by the annexation of Kashmir which was the country of flowers. Astonished by different varieties of flowers in Kashmir, Jahangir records that 'they (flowers of Kashmir) are most remarkable and beyond counting (*be-hisab*) and calculation (*be-shumar*)'.[146] Shah Jahan went a step further and tabulated every single variety of flowers in Kashmir. Thus, singularly in Farah Bakhsh of Shalamar garden of Kashmir no less than 4, 500 flowers of roses (*gul-i surkh*) and in Nur Afza garden, 212 flowers of iris (*sausan*), still in buds, were counted.[147] The author of *Tarikh-i Hasan* listed fifty varieties of flowers grown in Kashmir while he mentioned only thirty two varieties of fruits.[148] In the royal presence of Jahangir, about fifty kinds of flowers had been picked from Nur Afshan garden of Kashmir.[149] Abu Fazl has furnished the name of twenty one fine smelling, in addition to other twenty nine flowers notable for their beauty, grown in Hindustan with their specifications and seasons.[150] Some flowers used to bloom during day like roses and some during night like jasmine. Thus, gardens adorned with fresh flowers and their fragrance stayed in day and night.

[143] *Baburnama,* p. 202.
[144] *Tuzuk,* pp. 3-4.
[145] Ibid., p. 3.
[146] Ibid., p. 294.
[147] Lahori, *Padshahnama,* II (i), p. 192; Inayat Khan, *Shahjahanama*, p. 268; Salih Kambuh, *Amal-i Salih,* II, p.244. Salih Kambuh says that the flowers of *gulab* and buds of *sausan* both were in Shalamar gardens. However, it is confirmed by both Lahori and Inayat Khan that rose flowers were in Shalamar and iris buds were in Nur Afza gardens.
[148] *Tarikh-i Hasan,* pp.190-97.
[149] *Tuzuk,* p. 309.
[150] *Ain,* I, pp. 56-59, 62-65.

Like fruits and trees, flowers had been imported from the native lands of Mughals as well as transported from one place to other within Hindustan. It was Babur who first brought the beautiful red flower of *kaner* (Oleander) from the garden of Rahim-dad of Gwalior to the garden of Agra and compared the peach blossoms.[151] It is believed that immigrant Muslims introduced Central Asian rose[152] which later on spread in almost every garden of Mughal India. The author of *Ain* says that it is difficult to give the description of the flowers of Hindustan as there are so many; apart from them, there were many flower varieties of Iran and Turan such as *gul-i surkh, nargis, banafshan, yasman-i kabud, susan, raihan, ra'ana, zeba, shaqaiqtaj-i khurus, qalgha, nafarman* and *khatmi* etc.[153]

In the same way, as different fruits needed different climate and soil for successful plantation, flowers also required the same. Thus, different regions had different specifications of flowers. Undoubtedly, Kashmir stood on top of the best regions for the growth of various odoriferous and beautiful flowers where almost every kind of flower and sweet-smelling herbs (*rayahin*) grew.[154] Besides, there were some local flowers which have not been found anywhere else such as *phak* and *push-i aliyya-i umum*.[155] However, other regions were not less important. The gardens of Lahore had been adorned with rose, marigold, tulip, jasmine, iris and arghawan etc. and with diverse sorts of Indian flowers.[156] Kabul was especially famous for the flowers of tulip where Babur himself saw thirty two or thirty three different varieties of tulip.[157] Probably Kabul's Tulip travelled eastward, since it was found in the garden of Sirhind also.[158] There was a unique flower, found in the gardens of Rohtas (Punjab) and Hazara, known as *laila-i begana* in Persian and *thal-kanwal* in Hindi which was white inside and red

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[151] *Baburnama*, p. 224.
[152] Villiers Stuart, *Gardens of the great*, p.4; Hamida Khatoon, *Urbanisation*, p.44
[153] *Ain*, I, p. 65.
[154] Ibid., II, p. 169; *Tuzuk*, pp. 294, 299-300, 309, 313; *Masir- i Jahangiri*, pp. 290, 299; Salih Kambuh, *Amal-i Salih*, II, pp. 24-26; *Tarikh-i Hasan*, pp. 190-97.
[155] *Tuzuk*, pp. 294, 303. '*Push'* means 'flower' in Kashmiri. Perhaps the name of the flower *push-i aliyya-i umum* means 'flower of Ali the perfect'. (*Tuzuk*, tr., II, p. 134 and n).
[156] W. Finch, *early Travels*, p. 166; *Adab-i Alamgiri*, II, p. 816.
[157] *Baburnama*, p. 86.
[158] *Adab-i Alamgiri*, I, pp. 31-32.

outside.[159] In the environs of Agra the flowers of almost all varieties were available.[160] Abul Fazl informs that in Gujarat, Delhi and Thatta, various kinds of flowers grew.[161] Especially *champa,* jasmine, roses and anemones were famous flowers of the gardens of Gujarat.[162] The best kind of Jasmine flower was planted in the hill gardens of Gwalior.[163] Different varieties of roses were found everywhere in Indian gardens. In Bihar, there was a local flower known as *muchkand*, found at Maner, resembling the flower of *dhatura* which was not found elsewhere.[164] The flower of Sewti and keora were in abundance in Orissa.[165]

There was a peculiar custom in Kashmir that the houses were built in two to three stories and the roofs of the house were covered sometimes with simple tulip and sometimes with a special kind of tulip known as chaughasi tulip (*lala-i chaughasi)* which used to be bloomed in Spring and looked exceedingly beautiful (*khushnuma*).[166] Salih Kambuh picturize it as 'the house caught a fire'.[167] Kashmir, the abode of flowers, used to organize flower festivals.[168]

Though the main concern of planting the flowers in the garden was to enhance the beauty of the garden and spreading the fragrance, the flowers of the gardens were used for making rose water and perfumes also. Manucci tells that the three principal Imperial abodes Delhi, Agra and Lahore of Mughal Empire were full of palaces with gardens, where there had always been flowers, according to the season, chiefly roses from which essence was distilled for royal household.[169] Distillation of rose water was done by putting fresh rose flower in water.[170] The invention of rose water led to the discovery of

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[159] *Tuzuk,* pp. 288, 289.
[160] *Ain*, II, p. 84.
[161] Ibid., p. 116, 134, 165.
[162] *Tuzuk,* p. 115; *Mirat*, II. p. 420; Pietro Della valle, I pp. 68, 96, Fryer, p. 40.
[163] Manucci, I, p. 68.
[164] *Ain*, II, p. 62; Sujan Rai Bhandari, *Khulasat-ut Tawarikh,* op.cit., p. 38.
[165] Ibid., p. 51.
[166] *Ain,* p. 169; *Tuzuk,* p. 299; Eng.tr., II, pp. 145-46; Salih Kambuh, *Amal-i Salih,* II, p. 24.
[167] Salih Kambuh, *Amal-i Salih,* II, p.24.
[168] Sufi, *Kashir,* II, p. 528.
[169] Manucci, II, p. 463.
[170] Irfan Habib, 'Notes on the Economic', op.cit., p. 130.

'itr-i Jahangiri' by Nur Jahan's mother in the seventh regnal year of Jahangir.[171] Jahangir himself confirms that it was not introduced before him as he says 'I have the same regret (as of some fruits) that his (Akbar's) nostrils were not gratified with such essences'.[172] He further goes on to say about the process that 'when she (mother of Nur Jahan) was making rosewater, oil like substance (*charbi*) formed on the surface of the dishes into which the hot rose water was poured from the jugs. She collected this little by little, when much rose-water was obtained, a sensible portion of *charbi* was collected.[173] The name of this perfume *'itr-i Jahangiri'* was given by Salima Sultan Begum and in reward of this invention, mother of Nur Jahan (*walida-i Nur Jahan)* was presented a necklace of *marwarid* worth of Rs. 30,000. The invention was indeed unique and its smell was incomparable to any perfume.[174] However, with the passage of time the invention of rose water and *itr* was ascribed to Nur Jahan herself. Jahangir praises the *itr* and writes that 'it is of such strength in perfume that if one drop (*qatra*) rubbed on palm of the hand, it scents (*mu'attar)* a whole assembly (*majlis*) and it appears as if many rose buds (*ghuncha-i gul-i* Surkh) had bloomed at once'.[175] Another hyperbolic description of the smell of *itr-i Jahangiri* has been given by the author of *Muntakhab-ul Lubab* that with the smell of that not only human beings but angels would be scented (*mu'attar)* too.[176]

It is worth noting that in course of time, as per demand, the *itr* manufacturing center was shifted from court to market. Thus, on account of the rise in rose crop production, the center of commonly manufactured itr also increased. Consequently, there was decrease in *itr* price. It has been recorded that by the end of the seventeenth century, the price of *itr* decreased from Rs.100 to 15 for one rupee's weight and from Rs. 80 to 8-9 for a *tola*.[177] There were special gardens, in Mughal India, named as Gulab/Gulabi Bagh. Gulabi Bagh or garden of Rosewater in Lahore, according to the chronogram of

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[171] *Tuzuk*, p. 232; *Muntakhab-ul Lubab,* I (i), p. 272.
[172] *Tuzuk*, p. 232.
[173] Ibid.; Also, Irfan Habib 'Notes on the Economic', op.cit., p. 130.
[174] *Muntakhab-ul Lubab,* I (i), p. 272; *Tuzuk*, p. 232.
[175] Ibid.
[176] *Muntakhab-ul Lubab,* I (i), pp. 272-73.
[177] Ibid., p. 273; Manucci, I, pp. 163-64; Irfan Habib, 'Notes on the Economic', op.cit., p. 131.

the inscription of the garden, was founded in 1655 AD by Mirza Sultan Beg who was *Mir Bahr* under Shah Jahan and cousin of Mirza Ghiyasuddin of Persia, son-in-law of Shah Jahn.[178] The nomenclature of the garden itself suggests that it was special garden of roses and more specifically rose water. In Gujarat also, there was garden of roses named as Rose garden (Gulab Bagh) from the times of the Sultans at Ahmadabad. The rose flowers (*gulha-i-gulab*) were in abundance in the Gulab Bagh and Shahi Bagh of Ahmadabad.[179] The author of *Mirat-i Ahmadi* informs that up to the *subedari* of prince Mohammad Azam Shah perfume and rose water were extracted from the flowers of the Rose Garden and Mulberry Garden (*tut bagh*) not only for the use in Gujarat but for the use of Imperial establishment also.[180] The Nur Manzil garden was titled often by Jahangir as 'Rose garden'[181] which indicates the abundance of roses in the garden. The rose crops in Kashmir were so abundant that in 1640 AD when emperor visited the garden of Shalamar, he witnessed a plant of Rose covered with about 4500 flowers and buds (*gul wa ghuncha*).[182] Certainly the increase in rose flower production was intended to meet out the demand of flowers for making rose water and *itr*. Thus, much emphasis was laid on the cultivation of rose flowers, even in those places where earlier it was not grown at all.[183] Sujan Rai Bhandari informs that the 40 *man* (Alamgiri) flowers of roses were sent from the garden of Fidai Khan at Pinjaur to the Gulab Khana and the amount of flowers went on increasing day by day.[184] The tradition of distilling rose-water and perfume, in later times, reached to the extent that the two-story building adjacent to Badshahi mosque at Lahore, which was built for students during the time of Aurangzeb and in subsequent time used as Abdar Khana, turned into Gulab Khana or 'Rose-water House' at the time of Ranjit Singh.[185]

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[178] Latif, *Lahore*, p. 134.
[179] *Tuzuk*, pp. 214-15; *Mirat*, I, p. 337; Ibid (Suppl), pp. 21-22.
[180] Ibid., p. 21.
[181] *Tuzuk*, pp. 264, 276.
[182] Lahori, *Padshahnama*, II (i), p. 192; Salih Kambuh, *Amal-i Salih*, II, p. 244.
[183] *Tuzuk*, p. 115.
[184] *Kulasat-ut Tawarikh*, p. 35.
[185] Latif, *Lahore*, pp. 117-18.

It was not only rose water and *itr-i Jahangiri* but other kind of perfumes and scented oils that were introduced and extracted from the flowers of the gardens. Akbar was so fond of perfumes that he established a separate department. Oils were also extracted from the flowers for the use of hairs and skin.[186]Abul Fazl has furnished information regarding the methods of extraction, name of extracted flowers and price of the purfumes.[187] A detailed methodology of perfume making and other uses of flowers has been recorded in a special chapter named '*dar-i itryat'* of the anonymous work *Bayaz-i Khushbui.*[188] All kinds of oils and rare perfumes were obtainable from Surat and sweet scented oil from Agra.[189] In course of time, perfume making industry was developed in the large towns of Champaner, Ahmadabad, Surat, Sironj, and Navsari etc.[190]

However, apart from extraction of rose water, perfume and oil, flowers were plucked and used for the purpose of decoration and other uses of royal and noble household.[191] Flowers were also used for the dyeing of skin, hairs, cloths, utensils and papers.[192]

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[186] *Ain,* I, p. 53.
[187] Ibid., pp. 54-56, 59-62.
[188] *Bayaz-i Khushbui,* ff. 5a-12a.
[189] *Ain,* II, pp. 84, 116.
[190] Hamida Khatoon, *Urbanisation,* pp. 45-46.
[191] Irfan Habib, 'Notes on the Economic', op.cit., p. 130.
[192] *Bayaz-i Khushbui,* ff. 5a-12a; Hamida Khatoon, *Urbanisation,* p. 45.

Table VI showing herbs and vegetables grown in the Mughal gardens

Persian Name	**English Name**	**Botanical Name**	**Season**	**Place of origin**	**Gardens/region**
Barg-tambul/ Pan	Betel leaf	*Piper betle*	All seasons	India	Agra, Allahabad, Bengal, Bihar, Guarat, Khandesh, Malwa, Orissa, Sironj,
-----	Brinjals	*Solanum melongena*	Rainy	-----	Surat
------	Beet-root	*Beta vulgaris*	------	------	Kashmir
------	Cucumbers	*Cucumis sativus*	Summer & Rain	------	Surat
-----	Green Basils	------	All seasons	India	India
------	Gourd	*Lagenaria siceraria*	------	------	Surat
------	Potato	*Solanum tuberosum*	------	------	Surat
------	Pumpkins	*Cucurbita moschata*	------	------	Surat
------	Radish	*Raphanus sativus*	-----	-----	Kashmir
Raihan	Sweet basil (herb)	*Ocimum basilicum*	All seasons	Iran & Turan	Gujarat, Kashmir, Lahore

Sources*: Ain; Tuzuk; Masir-i Jahangiri; Padshahnama; Amal-i Salih; Khulasat; Mirat; Tarikh-i Hasan; Bernier; Manucci; Pietro Della Valle; Scent in the Islamic; Sylvia Crowe; Jahangir-The Naturalist; The Persian Gardens.*

Besides fruits, trees and flowers, herbs and vegetables (*tarkari*) were also cultivated in private gardens as well as those under government ownership (*sarkar-i-wala*).[193] The information, although scanty and meager, has been used to make the following table of herbs and vegetables grown in the gardens.

Herbs like *rayahin* and green basils were grown in the gardens for medicinal and other purposes. Generally, most of the flowers and some fruits were used as herbs, like

[193] *Mirat*, I. p. 261, II, p. 420.

the flowers of *khatmi* and yasman-*i kabud* and fruit like *amla*. Kashmir, apart from having abundance in various exotic fruits, odoriferous and beautiful flowers, produced various kinds of sweet-smelling herbs (*rayahin*).[194] The other important region for producing *rayahin* and green basils was Gujarat.[195] It is worthy to note that at Sironj, special gardens of betel-leaf were laid out,[196] which has been considered among herbs. According to Abul Fazl, betel-leaf of fine quality was obtained from the environs of Agra.[197] Betal-leaf of Bihar, especially the *magahi,* was famous for its colour, thin texture, and delicate and pleasant taste.[198] Orissa also produced various species of betel-leaves.[199]

Another neglected but important produce of the gardens was vegetables. The travelers witnessed some of the gardens bifurcated in four sections/plots, separated by walkways and cypress trees on regular intervals. In one of the plots, vegetables were grown.[200] The author of *Mirat-i Ahmadi,* notes that vegetables (*tarkari*) and fruits (*mewa*) were cultivated by officers (*hukkam*) and wealthy persons (*ahl-i-daulat*) in their private gardens as well as by government officers in Imperial gardens. They used to sell the surplus produce to vegetable dealers (*tarkari-faroshan*) for an enhanced price.[201] Vegetables were grown in the plots near towns also. The gardeners (*mali*) engaged themselves in the cultivation of pot herbs and vegetables during the day and used to guard them at night.[202] Lahori states that vegetables were grown in the gardens of Kashmir.[203] These included vegetables like beet-root and radish.[204] John Fryer furnishes

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[194] *Ain*, II, p. 169; *Tuzuk*, pp. 294, 299-300, 309, 313; *Masir- i Jahangiri*, pp. 290, 299; Salih Kambuh, *Amal-i Salih,* II, pp. 24-26; *Tarikh-i Hasan*, pp. 190-97.
[195] *Tuzuk,* p. 115; *Mirat*, II. p. 420; Pietro Della Valle, I, pp. 68, 96; Fryer, p. 40.
[196] W. Finch, *Early Travels*, p. 143.
[197] *Ain*, II, p. 84.
[198] Ibid., p. 62.
[199] Ibid., p. 51.
[200] Manrique, II, pp. 183-84.
[201] *Mirat*, I. p. 261.
[202] Irfan Habib, *Agrarian*, p. 52 & n.
[203] *Badashahnama*, I (ii), p. 29.
[204] Bernier, p. 397.

the names of the vegetables grown in the gardens of Surat such as potatoes, brinjals, pumpkins, gourds and cucumbers.[205]

The plantations in the Mughal gardens have some symbolic meaning also. Elizabeth Moynihan is of the view that flower and fruit bearing trees represented renewal and the cypress represented eternity to the Mughals.[206] Thus, the plantation was of two kinds: firstly, the mighty and evergreen trees like chinar and cypress symbolized 'eternity'; secondly, fruit and flower bearing trees like mango, apples, roses and jasmine symbolized 'life'. The picturesque scene of the Shalamar garden of Lahore is described by Salih Kambuh: 'after seeing at one side the cypress with its luster and charm and fountain at another side with its melodious sound, it seemed as the two lovers-cypress as well as fountain are picking up the flower of love in the gardens; sometimes tears came out of the eyes of fountain because of the scene of cypress trees'.[207]

The Mughal gardens disclosed a unique feature of plantation of trees in pairs. Thus, two trees were planted together, such as lemon and citron or lemon and orange amid the flower bed of the gardens or even two cypress and two date trees. It is said that the pair represented lovers in the Paradise gardens.[208] The plan prepared by Villiers Stuart displays the arrangement of flowerbeds which had been arranged alternatively by small and oblong flowerbeds. The small flowerbeds of Taj garden had single small tree of either lemon or orange while Shalamar garden of Lahore had single cypress tree in the center. In contrast, the oblong beds had pair of cypress trees in Taj garden while pair of small trees, either lemon or orange, in Shalamar garden of Lahore **(Plan: IV).** Paintings depicting two cypresses, sometimes with two banana trees, together in the gardens strongly corroborate the concept of the pair or lovers (**Plates: III, IV, IX, XXIV, XXV, XXVII, XXIX, XXXI, XXXVI, XLIX).** Besides, the concept and symbolism of *chaharbagh* may be also gauged from the depiction, in the paintings, of four tall and well

[205] Fryer, pp. 40-41.
[206] Moynihan, *Paradise as a Garden,* p. 101.
[207] *Bahr-i Sukhan,* f.120, as cited in Abdul Rehman, 'Garden Types in Mughal Lahore', op.cit. p. 165.
[208] Villiers Stuart, *Gardens of the Great,* p. 196.

measure cypress trees in flowerbeds bifurcated by waterways and tank or pavilion in the center. Furthermore, these four tall cypress trees give impression of four towers of tomb garden, resembling Taj Mahal (**Plates: I, V, XXIX, XXXVI, XLIX).**

The Flowers, fruits, trees and vegetables in the Mughal garden can also be compared with the Paradise. In fact, in *Quran* fruits like pomegranate, dates, olive, figs and vine (a kind of grape) are frequently mentioned but strictly to be enjoyed by the believers only.[209] Not only fruits but corn, vegetable and separate groves of dates, pomegranate and grapes also figure in the *Quranic* garden.[210] Even the fencing of grape garden by date palm trees has been mentioned in the *Quran*.[211] Interestingly, their beauty and fragrance attracted Mughals to include in their gardens. However, there is no mention of flowers in the *Quran*. The author of *Bahr-i Sukhan,* however, exaggerates that the garden of Paradise would feel depressed after seeing the greenery of the grassy plots, full of flowers, of Shalamar garden of Lahore and its flower beds were giving the impression that the galaxy of stars were knitted together.[212]

Thus, there was a constant effort by Mughals to create the orchard of Central Asia and Persia in Agra by introducing varieties of plants there. However, the Qutub Shahi and Adil Shahi dynasties of the same time, reconciled themselves in the new home of Deccan. Ali Akbar opines that in their gardens and orchards coconut umbrella was as green and shady as that of chinar; betel-nut palm was more graceful than cypress; paddy fields were more refreshing sites than the fields of melon and water-melons; Indian basils were like Persian hyacinth and even if there were not the hundred petals rose blooming yet one could always find the hundred petals marigold.[213]

Conclusively, the gardens in Mughal India were decorated mainly by exotic fruits, beautiful fragrant flowers alongwith shady and decorative trees, herbs and vegetables. They altogether automatically enhanced the natural environment. Certainly, the gardens

[209] *Quran*, 2:266, 6:99, 6:141, 13:4, 17:91, 18:32, 23:19, 36:34.
[210] Ibid., 6:99, 13:4, 17:91, 36:34, 78:15.
[211] Ibid., 18:32.
[212] *Bahr-i Sukhan,* ff. 118-19, as cited in Abdul Rehman, 'Garden Types in Mughal Lahore', op.cit. p. 165.
[213] Ali Akbar Hussain, *Scent in the Islamic,* p. 38.

in Mughal India became the sites of horticultural experiments. Besides all the development in growing indigenous as well as imported tress in the gardens, there were two remarkable developments—'grafting' and 'distillation of rose water and perfume'.

Conclusion

Gardens in Mughal India synthesized the aesthetic, symbolic and functional needs of the society as well as of the State. The Mughal gardens have generally been considered as the symbolic representation of the *Quranic* Paradise. But practically, Mughals wanted to create a metaphor of Paradise, not the real paradise, just to place themselves supreme over their subjects. Thus, apart from its conceptual metaphysical aspect, the royal Mughal gardens may be viewed as a symbol of royalty, reflection of kingship and territorial control. The gardens also emerged as a symbol of efficiently administered territory, an emblem to show the triumph of the ruler by celebrating the ceremonies like coronation and victories, and as a halting place for rulers and officials, foreign envoys and dignitaries. Often gardens served as a political and administrative space for holding court and dispensing justice. In short, the gardens acted as a political arena where both ritual of powers and control of resources were at stake.

The role of gardens in the emergence of the empire may be understood by the given map, based on epigraphical and literary evidence, which shows the extent of the spread of gardens. Although the gardens had dotted whole of Mughal Empire, the core area of garden building was Ganga-Jamuna plain around Delhi, Agra, Awadh, Allahabad, Bihar, Bengal and also the eastern part of Rajasthan. In Northern parts of the empire, Kashmir and Punjab displayed uncounted gardens. In Western region, Gujarat had innumerable gardens concentrated mainly at Ahmadabad, Cambay and Surat.

It is well known that almost all the imperial cities and its river banks had threaded with imperial gardens. However, there were gardens in other cities of the *Subas* of Mughal India built by the nobles and other social elite who, although did not build the likes of Shalimar or Taj Mahal, contributed a lot in the garden building tradition. For instance, there were so many gardens in the *Subas* of Bihar and Bengal, at Patna, Hajipur (Vaishali), Maner, Rohtas, Munger, Dhaka, etc. Lahore has been known as ‘city of gardens’ because apart from imperial gardens, there were innumerable gardens built by the nobles at the bank of Ravi. Next to Lahore, Ahmadabad was also known as the ‘city of gardens’. Gujarat was the place where there were a large number of gardens of merchants like Abdul Ghafur, Shantidas Zaveri, Rustam Manak Parsi, Kissendas and

Ahmad Chellaby. These gardens were used not only by them but even by the Mughal officials as well as foreign envoys which indicates the political influence of the merchants of Gujarat. The favourable climate and gushing water forced Mughals to shift the garden building activity from plains of Agra, Delhi and Lahore to Kashmir. The author of *Tarikh-i Hasan* listed sixty one gardens of Mughal period with remarks that those were famous gardens only. Thus the banks of river Jhelum and Dal Lake were studded with myriad gardens.

The Mughals maintained the tradition of building *chaharbag*—symmetrical garden—which was initiated by Babur and touched its zenith under Shah Jahan. However, *chaharbagh* pattern was not rigidly followed in all the gardens since it was not always symmetrical. This view finds archaeological support when the excavated Mughal garden at Wah, near Hasan Abdal, revealed irregular pattern and design on the first and second terraces. Furthermore, miniature painting also depicts irregular arrangement of a walled garden.

The dynamic aspects of the gardens in Mughal India were their strong 'relation' and 'inter-connection' with structures, hydraulic technology, economy, management, socio-cultural experiences, political manifestations and horticulture.

Gardens and monuments in Mughal India became an 'inseparable part' of each other. The inter-connection of gardens with monuments can be ascertained by the presence of palaces, *khanabaghs*, *havelis*, mosques, tombs and shrines of Sufi saints in the gardens. Even the pleasure gardens which were devoid of these structures had some kind of buildings. For example, in the pleasure gardens of the Shalamar at Kashmir and Lahore, there were a large number of structures which include *Diwan-i am*, *Diwan-i khas*, *baradari*, *hammam* and *zanana* edifices which were generally meant for administrative, political and cultural activities. In addition to these, the Mughal gardens displayed other structural features such as platforms, water tanks often with fountains, water channels and terracotta pipes to supply water, cascades and decoration of flower vases, floral motifs, creeper designs and geometric patterns which represents some of the known elements of Mughal architecture. The gardens of English and Dutch laid out in the periphery of Surat

represented some characteristics of Mughal gardens, such as four long walks which made cross in the middle of the garden with *chatri*, pretty rooms, water tanks, fruit trees and flowerbeds, etc.

Central theme of Mughal garden was 'water' which was sometimes considered even more important than 'soil'. Thus, the permanent source of water supply was one of the most important and initial thing in the water management of gardens. There were lakes and tanks; wells and step wells; canals harnessed from the rivers; and natural springs. Various devices had been used to draw the water from outside to the inside of gardens, such as *charas* (leather bucket), *noria* (surface wheel), and *rahent/saqia* (Persian wheel) to lift water and obtain adequate pressure necessary for gardens. The hydraulic laws like 'siphoning' and 'Boyle's law' were in use.

The distribution of water in the gardens was accelerated through aqueduct generally built on walls. The Mughal gardens were adequately fed by two forces: 'natural' as well as 'artificial'. The former was working in the spring gardens like that of Kashmir and Hasan Abdal where there were natural terraces, while the latter was used in the gardens of plains like Agra, Delhi and Fatehpur Sikri, where the terraces were created artificially. Water used to flow from one terrace to another by cascading on *abshar* to create a rippling effect. To collect water, where there was more need of water supply like fountain, *hammam* and flower beds, etc., there were separate concealed terracotta pipes and underground channels which took the course from source tank through central tank. For operating fountains, a constant flow of water and pressure gradient created an effective siphon system. Excavations revealed that the terracotta pipe line was composed of a series of small cylindrical pipes. Each pipe was tapered at one end while wider at another end in which the tapered end was fitted to generate enough pressure for fountains. Consequently, the weak gravitational force provided the low fountain and high pressure provided high. The glistering water used to shoot up almost four meter high and dropped back to a rippling pattern on the water surface which often created a delicate floral pattern. Other water features in the gardens comprised floating pavilion, underground room surrounded by water, fountains, *abshar* (water-chutes) with *mahipusht* (fish scale) and shevran (zig-zag) pattern, *chadar* with *chinikhana* (niches), where lamps

were placed in the night and flower vase during the day. The design and types of hydraulic technology in the gardens were unique characteristics of the Mughal period.

Water was used in the gardens splendidly from aesthetical and functional point of view to enhance its beauty by water devices and to irrigate the plants and trees as well. However, the symbolic aspect of water in Mughal gardens cannot be ignored as octagon pool, four quadrants, fountains, etc. figure in the *Quranic* Paradise. They are not only related to religious symbolism but are related with other symbolism also, such as fountain as ‘life cycle’ which rises and merges and again rises.

To supervise these high levels of constructional and hydraulic works, a comprehensive management was needed. Among the technical and experienced officials, there were outstanding engineers like Ali Mardan Khan, Mulla Alaul Mulk Tuni, Haidar Malik and Ustad Ahmad Mimar.

Garden was a significant component of ‘urbanization’ and urbanization worked as stimulus in laying out ‘gardens’. Since gardens contributed a lot in the process of urbanization, inevitably the gardens became the center of economic activities. High expenditure was required in the laying out as well as in the maintenance of the gardens. Economically, gardens generated income by selling fruits, flowers and vegetables. This income was generated by sub-letting the gardens for commercial purposes but income was ever lesser than the expenditure. Ultimately, it led to the disparity in sanctioned and actual number of gardeners and oxen. To meet out the deficiency, there were concessions in garden tax (*sar-i darakhti),* from time to time, by the Mughal emperors. References would have us believe that probably garden tax was levied earlier but was exempted by Akbar which was obeyed by his successor Jahangir and Shah Jahan. But a shift in policy took place in the reign of Aurangzeb when the taxes were resumed. From his time onwards, taxes were levied on all orchards except for those containing graves or yielding no profits or where expenditure exceeded income. The tomb gardens as well as gardens given in *madad-i ma’ash* had also been exempted from all type of taxes.

Generally the deficit used to be maintained from the royal treasury and provincial treasury and even from some villages which were given in *waqf* for this purpose. Due to

the lack of adequate information, it is difficult to understand the level of expenditure in Mughal gardens, but huge expenditure may easily be gauged from the number of animals, wells, staff, cash money and areas of land allotted to the gardens. Expenditure on repair works further burdened the royal exchequer. Laxity in the maintenance of the gardens resulted in severe punishments even to some important nobles.

As for the management of the gardens, *Sahib-i diwan* was the main officer for collection of taxes and maintenance of the gardens. Under the supervision of *diwan*, *karoris* (revenue collector) were appointed and were responsible for the same. The garden staff was being appointed under the seal of *mir-i saman* but in *Subas* appointments were approved by *diwan-i Suba*. Like other departments of Mughal administration, there was an establishment of separate department to look after the repair works of gardens and its monuments with systematic chain of officials and workers, ranging from superintendents (*darogha-i baghat*), treasurer (*munsif)* and accountant (*tahvildar*) down to the gardeners (*mali*) for the maintenance and management of gardens. The gardeners (*baghban*) formed the strong agency as beautifiers and protectors of the gardens who have been symbolized with good and hard work in poetical genre.

In course of time, the gardens in Mughal India witnessed a shift in its scope as from being merely a physical site to a well demarcated 'cultural zone'. The systematic scrutiny of the Mughal paintings, corroborated with literary sources, reveals that the raised *chabutra* or pavilion, sometimes roofed and sometimes opened, was erected purposely to enjoy conversation with learned men and sages; friends and ladies; to enjoy wine, music and dance; to play and watch games; and to listen, recite and compose poetry, and so on. The ceremonies like birth, wedding and festivals were hosted in the gardens. Inspired from Mughals, all these cultural activities were not only followed by the Mughal nobles but also by the Europeans and other rich persons in their private gardens. Literally, garden was a place with a 'life' and practically it emerged as a place of 'cultural interactions' during the Mughals.

The cultural activities, of which we have enough evidence, tend us to believe that apart from private amusement, the gardens were also built for general public. The

inscriptions and graffiti endorsed the literary information that some of the gardens were initially laid out as ‘private’ but in course of time became ‘public’. Besides, some of them were laid out for public use since their beginning. Thus, the gardens were laid out to spread the reputation of the builders and were later made public to popularize the builder’s name and fame.

The plantation of fruit trees, shady and other decorative trees, flowers and herbs in the Mughal gardens were not only for aesthetic reason or to enhance the beauty but had some symbolic and functional aspects too. The mighty and evergreen trees like chinar and cypress symbolized ‘eternity’ while fruit trees and flower bearing plants like mangos, pomegranate, roses and jasmines symbolized ‘life’. Paintings frequently depicted trees in pairs which probably symbolized lovers in the gardens. Likewise, four cypress trees on the corner of tanks perhaps symbolized the concept of ‘*chaharbagh’*. The fruit trees in the Mughal gardens translate the symbolism of the Paradise garden also since in the *Quran* fruits like pomegranates, dates, figs, olive and grapes have repeatedly been mentioned.

Above all, the gardens in Mughal India created a natural environment by providing exotic fruits, flowers, herbs, trees and vegetables. One of the most distinguished features of the Mughal gardens was its closeness to nature. When they produced all these on huge level, it automatically improved the environmental quality. Although the Mughals had not made conscious effort to improve environment, it automatically worked since trees and flowers were planted on strategic locations like around the water channels and water tanks, perhaps to reduce the evaporation losses and create moisture and to provide shades on the walkways. Thus, plantation was not only ‘ornamental’ but was ‘utilitarian’ too.

Fruit trees and flower plants ornamented the Mughal gardens in all seasons since fruits of hot as well as cold climate were grown as given tables show. Seasonal flowers along with night-blooming flowers were planted so that garden would not be sans flowers at any point of time.

The indigenous fruit trees as well as the imported had successfully been grown in the Mughal gardens. The gardeners located the favourable environment of foreign plants. Thus, the plants imported from Turan and Central Asia were mostly planted in the gardens of Kashmir. It was Babur who started import and export of trees and plants. Later in India also, they transferred the fruit seeds from one place to another to achieve the best quality. Consequently, the gardens in Mughal India became the sites of horticulturist experiments. Climate and soil played a distinctive role in the plantation of the 'native' as well as the 'introduced'. Two remarkable and innovative developments related to the garden of Mughal India have been the 'grafting of fruits' and 'distillation of rose water and perfume'.

Conclusively, like other transcultural things, gardens also played an inevitable role in connecting the provinces and even the countries since plants were transported from one place to another, sometimes in compatible climate and sometimes in less compatible through technological and artificial means. Not only the plants but architectural features such as pavilions, water tanks, walls of the gardens and hydraulic engineering were also transferred from one region to another which ultimately resulted in 'cultural assimilations'.

In short, the study has tried, by using a widest possible range of sources, to demarcate a line between 'imagined' and 'real' and between 'purpose' and 'usage'. Thus, sometimes, the poetical and symbolic retrospection of garden as a paradise was followed and sometimes it was accompanied by economic, political, cultural and other uses and meanings.

Appendices

A. Table

Table

List of Inscriptions related to gardens in Mughal India

S. No.	Name	Find spots	Date	Name of the builders	Language (s)	Remarks
01	Naim bagh	Ahmadnagar	1572-73	----	Persian	EI (A&P), 1933-34, p.11
02	Farah Bakhsh	Ahmadnagar	1574-75	Nimat Khan on the order of Murtaza Nizam Shah	Persian	EI (A&P),1933-34, pp.11-12
03	Bagh	Fath Mahal, Bijapur	16th C.	Syed ShahMardan	Persian	EI (A&P),1955-56, pp.83-84
04	------	Ahmadnagar	16th C.	during the time of Nizam Shah	Bilingul, Persian& Marathi	EI (A&P), 1939-40, p.30
05		Sherpur, Bengal	1582	Nawab Mirza Murad Khan, son of Jauhar Ali Khan Kakshal	Persian	EI(A&P),1937-38, pp.21-22
06		Munger, Bihar	1598-99	Makhsus Khan, brother of the governor of Bihar Saeed Khan under Akbar	Persian	*Corpus A&P Insc of Bihar*, *pp*.178-79
07		Golkunda Fort	1602	Khairat khan, an envoy to Persia During the time of Sultan Abdullah Qutub Shah	Persian	EI (A&P),1913-20, p.55
08	Vernag garden	Vernag, Kashmir	1620	Jahangir, the Emperor	Persian	Noted in 2014 (personal)
09	,,	,,	1627	Haidar on the order of Jahangir	,,	,,
10	A garden	Rohtas, Bihar	1636	Malik Wisal, *darogha* of the fort of Rohtas under Shahjahan	Persian	*Corpus A&P Insc of Bihar*, pp.235-36
11	Bagh-i-Azam Khan	Ranpur, Ahmadabad	1641	Azam Khan, viceroy of Gujarat under Shah jahan	Persian	*Corpus Insc. Bhav.*, p.46
12	Zebun Nisa Garden	Lahore	1646	Zebun Nisa or Zebinda Begu, given to her female attendant Mian Bai	Persian	Latif, pp.188-90

13	Bagh-i-Husam	Udgir in Bidar (3 inscriptions)	1649	Husam-ud-Din Khan *Qiladar* of Udgir at the time of Shah Jahan	Persian	EI (A&P), 1987, pp.23-26
14	Bagh	Ekdil, a village, Etawah	1629-32	Ekdil Khan, an eunuch under Shah Jahan	Persian	EI (A&P),1967, pp.44-45
15	Dostan-i Bustan (Garden of friends)	Lucknow	1630-31	Muhammad Ashraf, brother of Mutamid Khan, the historian	Persian	*Masir-ul Umara*, *III (i)*, p. 434
16	Gulabi Bagh	Near Shalamar, Lahore	1655	Mirza sultan Beg *Mir Bahr* under Shah Jahan	Persian	Latif, p.134
17	Farh Bagh	Bidar	1671	Mukhtar Khan under Aurangzeb	Persian	Yazdani, *Manumunts*, p.178
18		Near Qandhar fort	1684	By Muhammad….(missing) during the reign of Aurangzeb	Persian	EI (A&P), 1919-20, p. 23
19		Patna city	1688-9	Buzurg Umeed Khan, *subedar* of Bihar under Aurangzeb	Persian	*Corpus A&P Insc of Bihar*, pp. 287-88
20		Amner in Morsi *taluqa*, Amravati Distt., Vidarbha	1692	Hussain (unidentified) for la ‘l Khan who was the subordinate of Kishan Singh under Aurangzeb	Persian	EI (A&P), 1967, pp.13-15; ARIE, 1964-65, No.D, 121; ARASI,1926-27, pp. 39-40
21	Rahat Bakhsh	Govt. museum, Madras	1692-93	Jahangir Khan (unidentified)	Persian	EI (A&), 1955-56, pp.103-4
22	Lal Bagh	Cambay	1695-96	Mirza Baqir, probably incharge of Cambay for some time during the *subedari of* Shujat Khan	Persian	Commissariat, II, p. 191
22		Shahpur sub division, Thane	1701	*Mir* Syed Zainuddin Ali Khan during the reign of Aurangzeb	Persian	EI (A&P), 1957-58, pp. 21-23
23		Ajmer	1703	Built by Danish at the instance of Syed Abdullah during the reign of Aurangzeb	Persian	EI (A&P), 1959-60, pp.45-46

24	Bagh-i-Mahaldar Khan	Delhi on the gateway of the garden near the Tripoliya Gate on the Karnal road	1710-11	Mahaldar Khan, probably Ghulam Nabi, *Nazir* during the reign of Muhammad Shah	Persian	Zafar Hasan, II, pp.270-71; R.Nath, p.68; *Asar*, I, 238
25	Bagh-i-Muhammadi	From step well, Kallur in Kalnur	1726-27	Bahadur Khan	Persian	EI (A&P), 1951-52, pp. 45-46
26	Bagh-I Nazir	Delhi (Qutub)	1748	Roz Afzun Nazir, a celebrated khwaja eunuch of the Emperor Muhammad Shah	Persian	Zafar Hasan, III, p.98, *Asar*, I, p.171;R.Nath, pp. 68-69
27	Shalamar Bagh (1620)	Srinagar, Kashmr **(5 Graffiti)**	1703 1709 1718 1741	Jahangir & Shah Jahan	Persian ,, ,, ,,	Graffiti noted down by Prof. Irfan Habib (Personal)

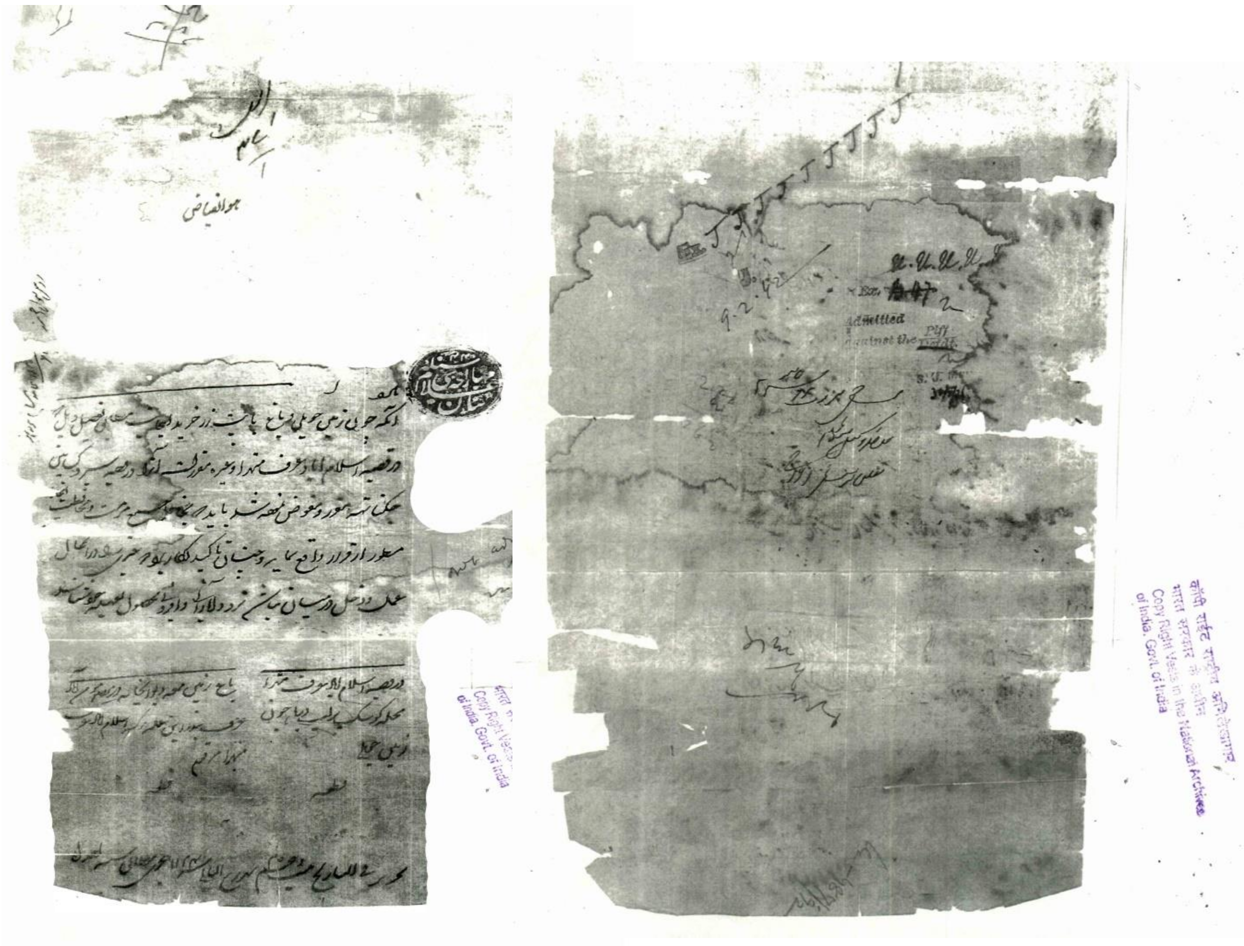
B. Documents

Document: I

Yaddasht to maintain the garden

The *Yaddasht*, dated 1124 AH/1712 AD, executed in the first *julus* of Farrukhsiyar, under the seal of Nelan, an official of Maharaja Jai Singh, records that the land of *haveli* and garden situated in *qasba* Mathura was assigned to Gosain Jagannath. Furthermore, it directs him to administer the garden with care and maintain it properly to enhance the revenues.

The document, written in fair *shikasta*, bears the surname Huwal Fayyaz, and is preserved in **National Archives of India** (Accession No. 2691/a), New Delhi, (Vide CAD, III, S. No. 171).



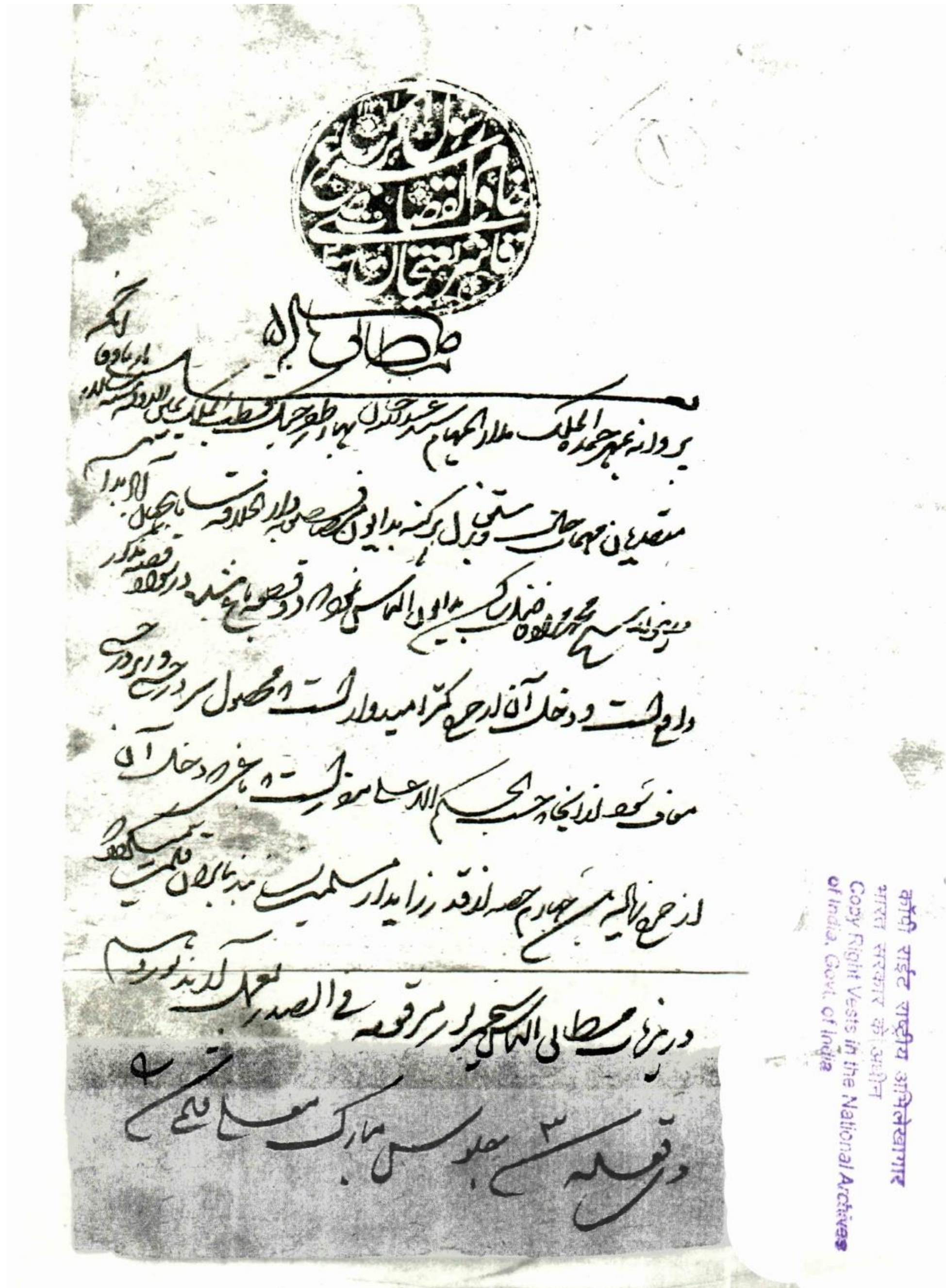
Courtesy: National Archives of India

Document: II

***Parwana* for the exemption of *sar-i darakhti* (garden tax)**

A *parwana* issued by Syed Abd Allah khan Qutub al Mulk Zafar Jung to the *mutasaddi* of *pargana* Badayun, *Sarkar* Shahjahanabad, in 1126 AH/1714 AD, ordered the exemption of *sar-i darakhti* of two gardens of Syed Muhammad Murad on the condition that if the expenditure exceeded the income.

The document, written in *shikasta*, with the seal of *Qazi-ul* Quzzat Shariat Khan, is preserved in **National Archives of India** (Accession No. 2323), New Delhi, (Vide CAD, I, S. No. 332).



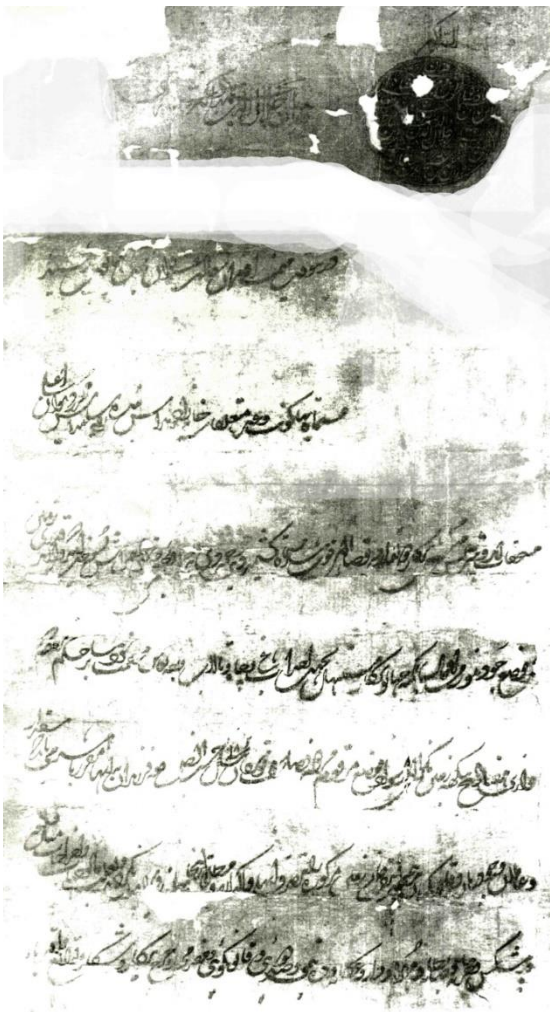
Courtesy: National Archives of India

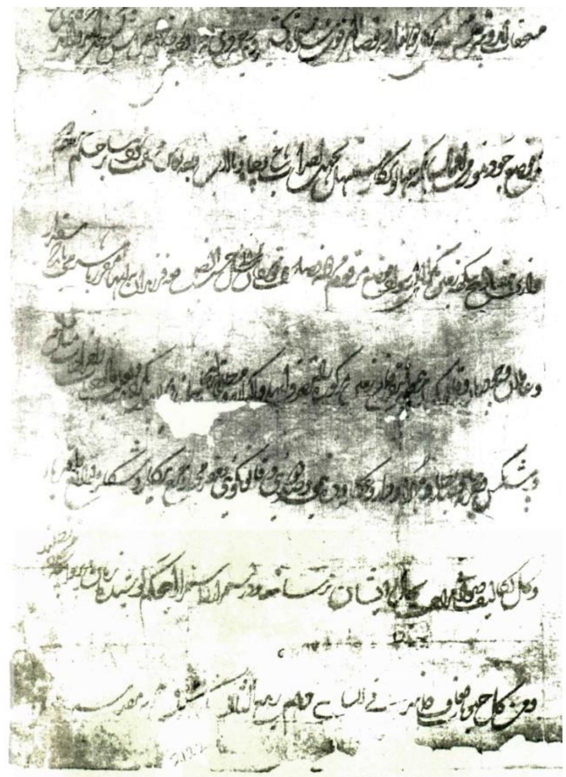
Document: III

Farman of Akbar: Garden exempted from tax

The *farman*, issued by Akbar in 987 AH/1579 AD, notified that 75 *bighas* of land was granted in *mauza* Jaudanpur, *pargana* Jalu, *Sarkar* Sambhal, to Bhagwat and others. In addition, most importantly, the *farman* states that the land would be free from all levies.

The document is written in *shikasta-taliq*, bearing the surname Allah-u Akbar, the *tughra* 'farmana-i Jalaluddin Muhammad Akbar Badshah-i Ghazi', with the seal of the Emperor including a number of seals, and is preserved in **National Archives of India** (Accession No. 2122), New Delhi, (Vide CAD, I, S. No. 26)





Courtesy: National Archives of India

C. Plans

Plan: I

A simple Plan of a *Chaharbagh* with its water channels

A simple water plan of a *chaharbagh,* Mehtab Bagh in Red Fort, Delhi, drawn by R.A. Barraud and Ebba Koch, shows the four divisions of the garden and its water channels.

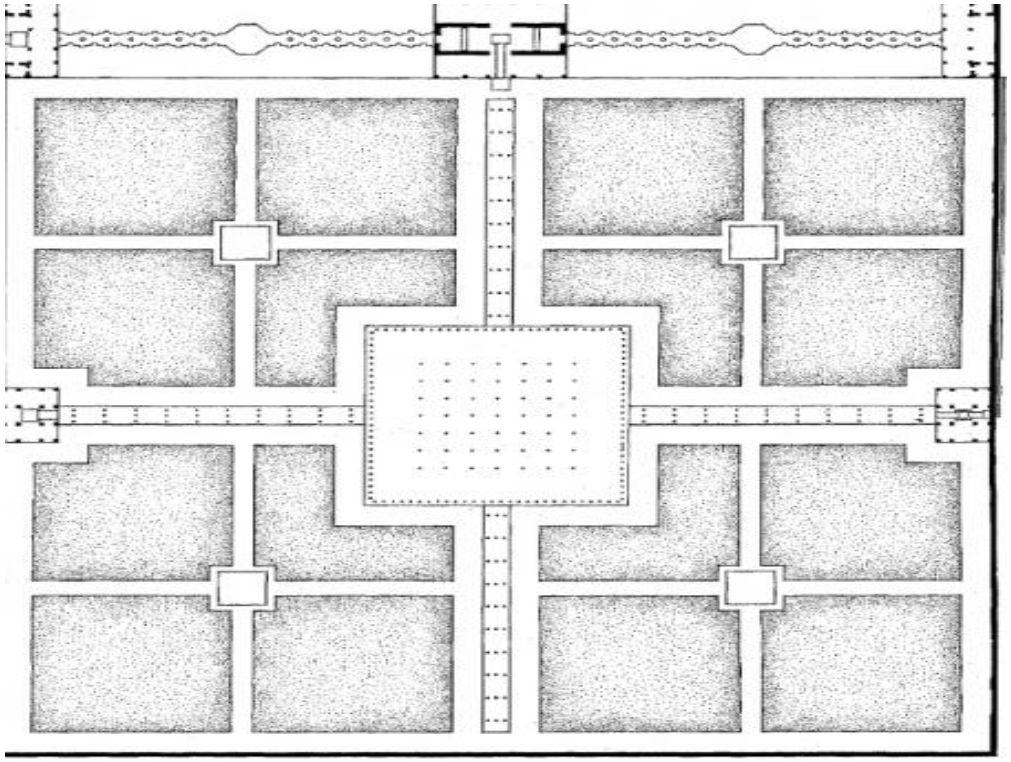
Source: Ebba Koch, 'Mughal Place gardens', op. cit., p.156.

Plan: 1I

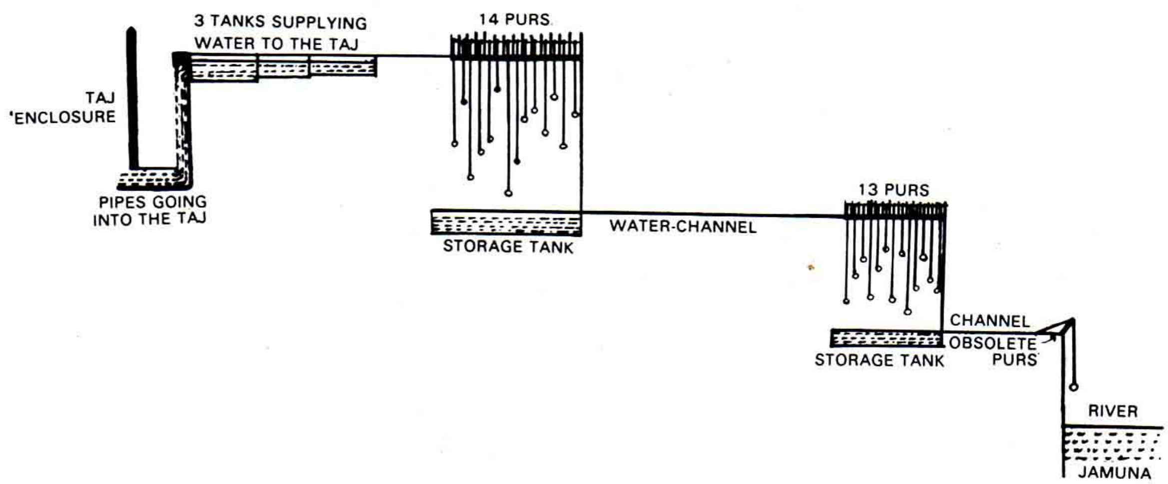
Water lifting Plan into three stages

Plan shows water-lifting process in which water has been raised from the river (Yamuna) through three sets of *pur* and supplied from the outside tanks into the garden (Taj Mahal) through pipe.

Source: Moynihan, *Paradise as a Garden,* p.133.



Courtesy: Ebba Koch



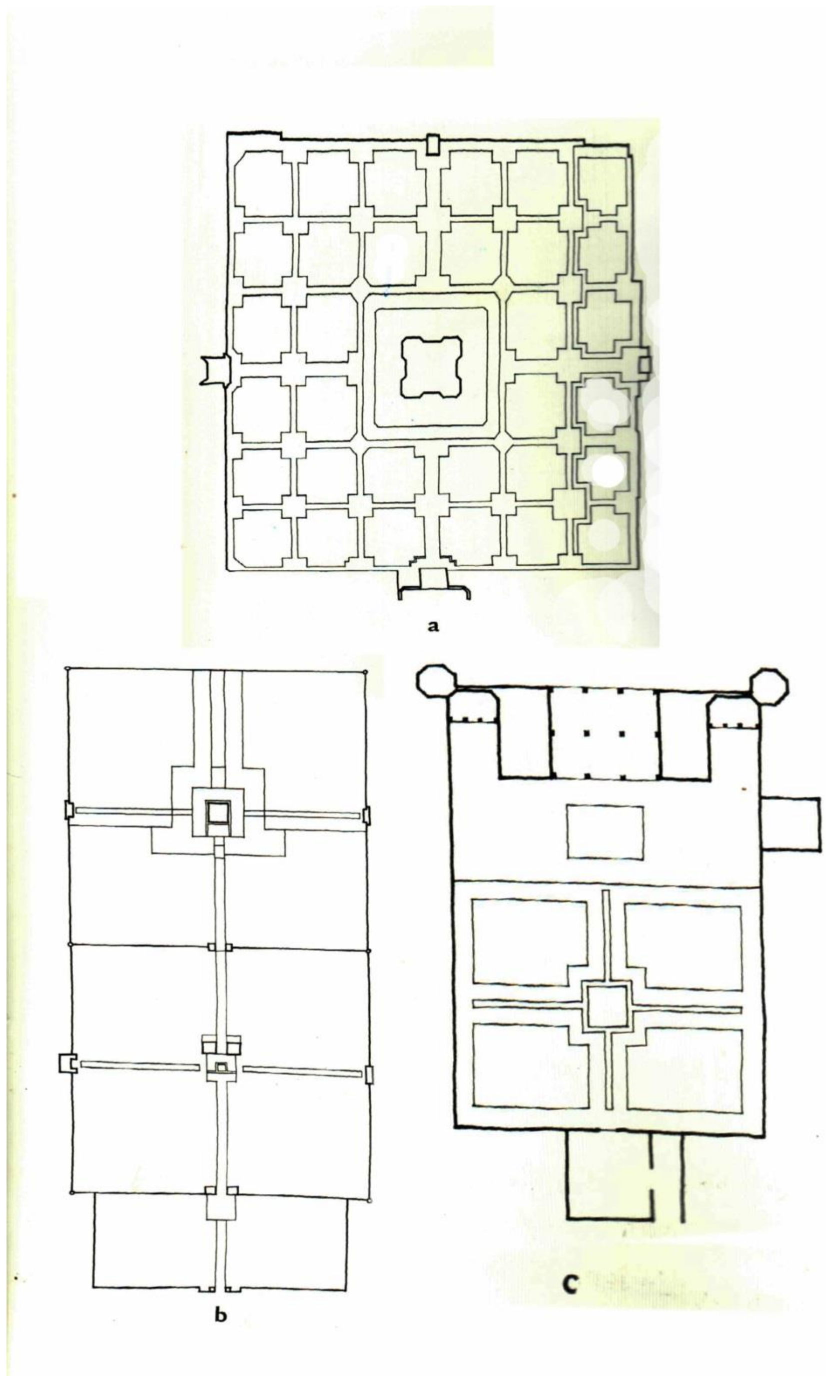
Courtesy: Moynihan

Plan: III

The Plan of three formal versions of *Chaharbagh*

The plan shows Ebba Kosh's division of the architecture of Mughal gardens into three formal versions of *chaharbagh*: (i) a canonical cross-axial: the tomb of Humayun (ii) terraced: Shalamar garden, and (iii) waterfront: Taj Mahal

Source: Ebba Koch, *The Complete Taj Mahal*, p. 25.



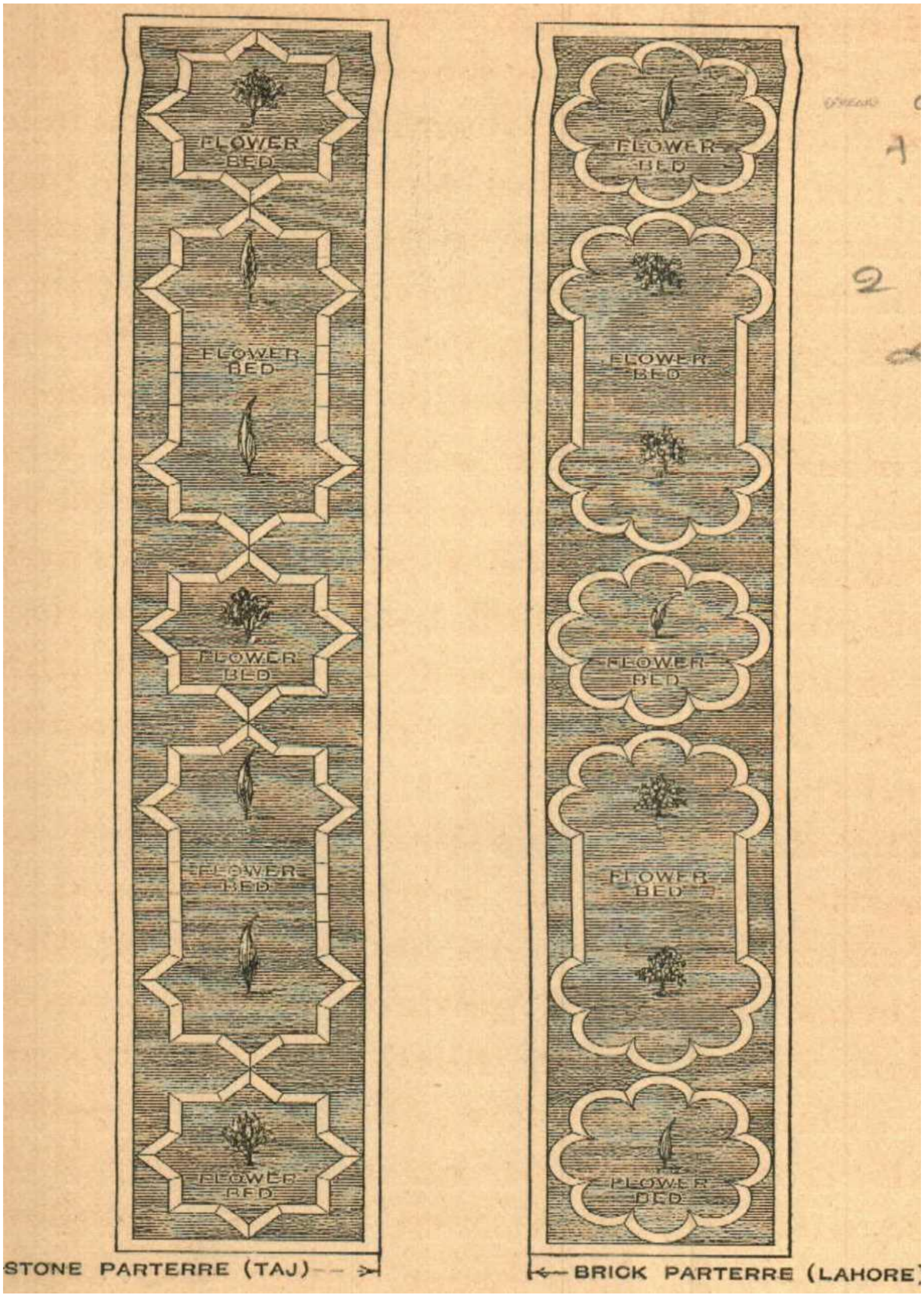
Courtesy: Ebba Koch

Plan: IV

Plan showing arrangement of flowerbeds

A comparative plan shows the star-shaped stone parterre flowerbeds of the garden of Taj Mahal and the octagon shaped brick parterre flowerbeds of Shalamar gardens at Lahore.

Source: Villiers Stuart, *Gardens of the Great Mughals*, p. 139.



Courtesy: Villiers Stuart

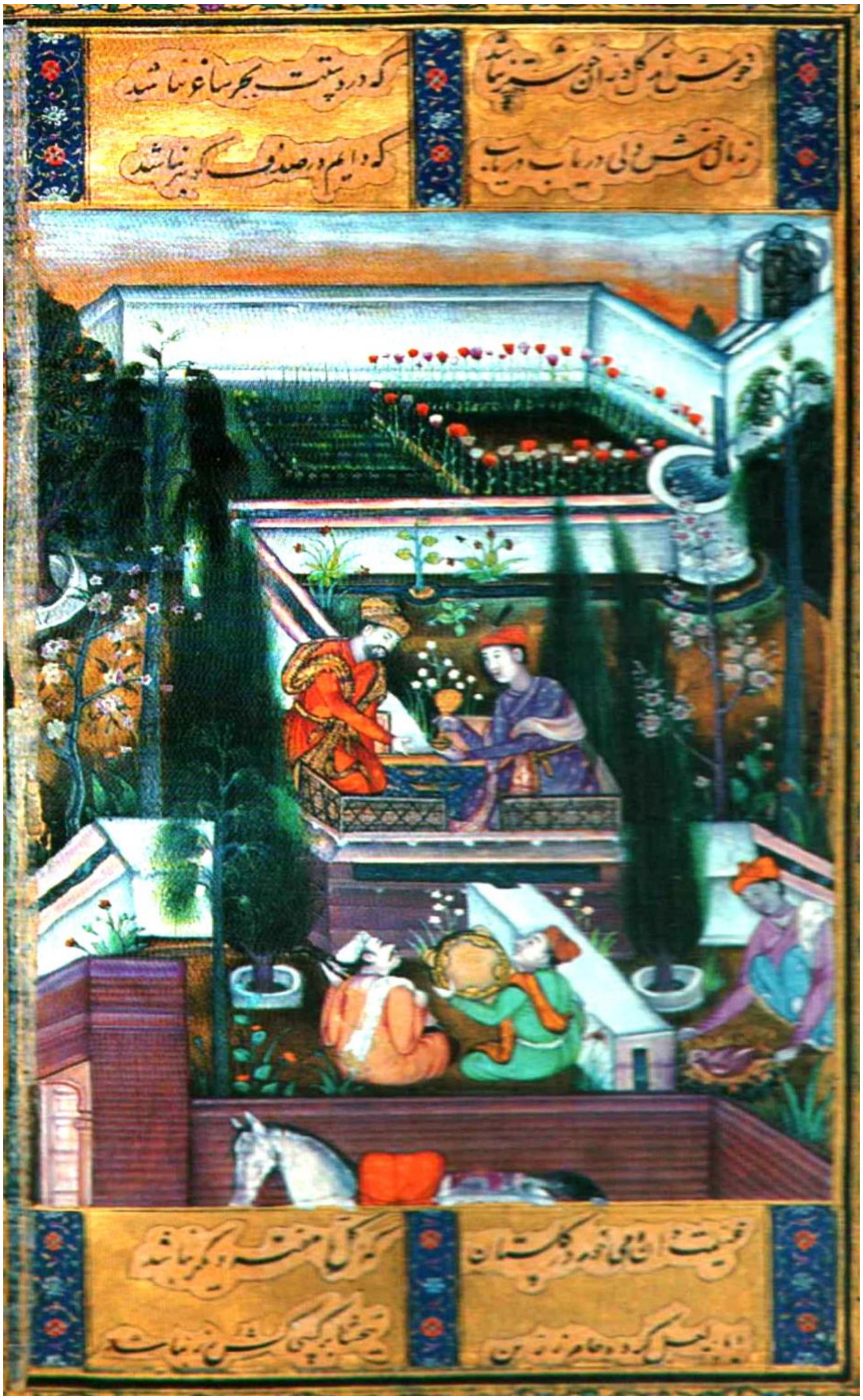
D. Plates (Paintings & Photographs)

Plate: I

Irregular arrangement of garden and a party scene

A sixteenth century (1585-95 AD) miniature painting of the illustrated manuscript of *Diwan-i Hafiz* by Farrukh Chela exhibits the irregular arrangement of a walled garden at Mughal Lahore. It also depicts pleasure party in surrounding of trees and flowers.

The painting, originally preserved in the **Raza Library, Rampur, India** is reproduced by Barbara & Desai, *Mughal and Persian Paintings,* Plate. No. 170.



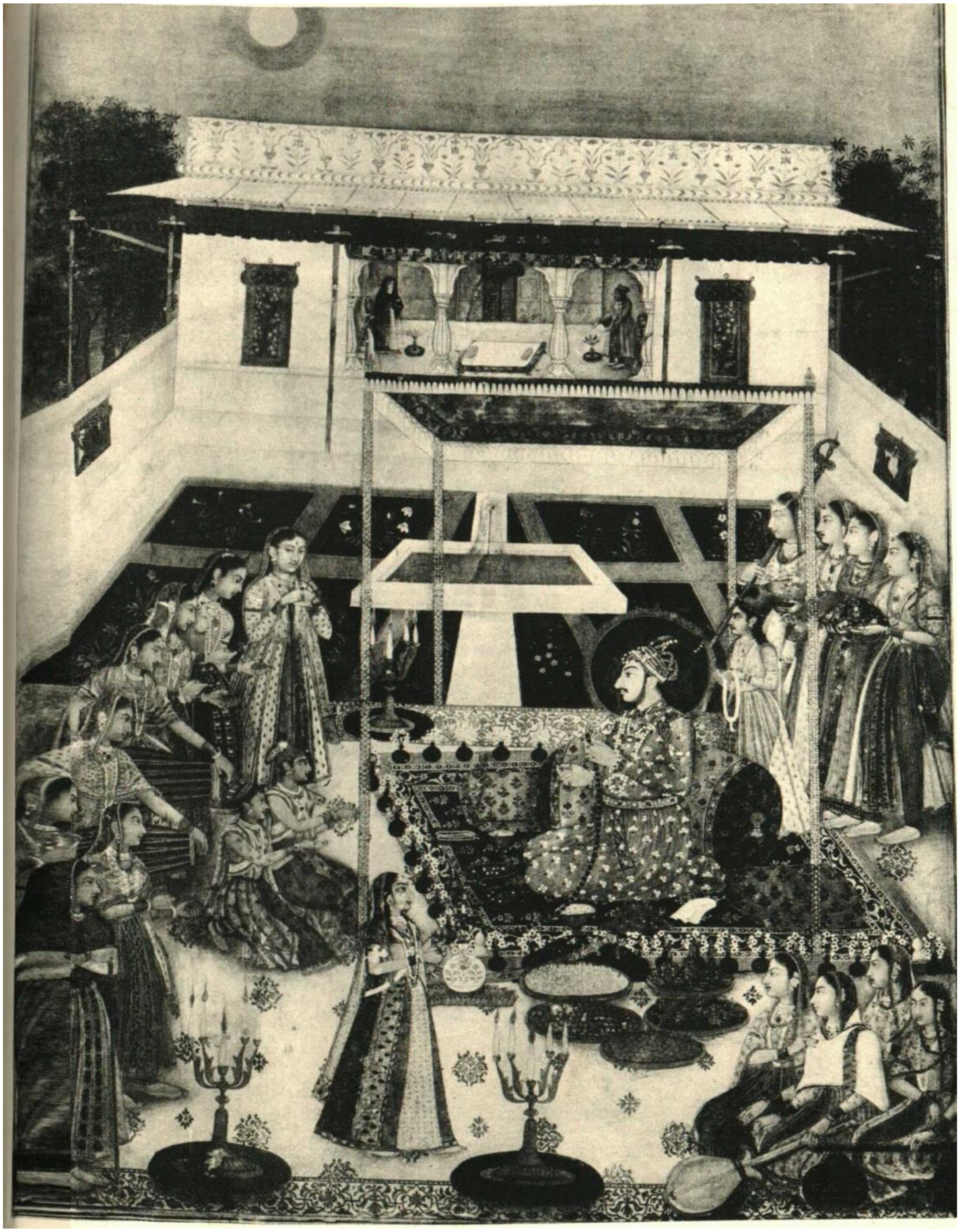
Courtesy: **Raza Library, Rampur.** After, Barbara & Desai.

Plate: II

Palace garden and entertainment

The painting of the Eighteenth Century (c.1720) clearly depicts the scene of a walled Palace garden in which emperor Muhammad Shah, as he was much interested to be in the company of females, is entertained by the twenty girls in the garden.

The painting is preserved in the **Collection of Kasturbhai Lalbhai, Ahmedabad**. It is reproduced by Stuart C. Welch, *The Art of Mughal India: Painting and Precious Objects*, (N. York, 1963), Plate No. 77.



Courtesy: Collection of Kasturbhai Lalbhai, Ahmedabad. After, Welch.

Plate: III

Prince discourse with sages in the garden

A painting of 17th century (1635), painted by Bichitr, depicts that a young prince, perhaps Dara Shikoh is sitting in an open pavilion of a beautiful garden with sages and learned men. Simultaneously the music and singing party have also been arranged in the garden as two singers/musicians are shown.

The Painting is now preserved in **The Library of A. Chester Beatty**. It is reproduced by Thomas W. Arnold, *Indian Miniatures: The Library of Chester Beatty*, rev. & ed. by Wilkinson, Reprint, (New Delhi, 2008), Plate. No. 58.



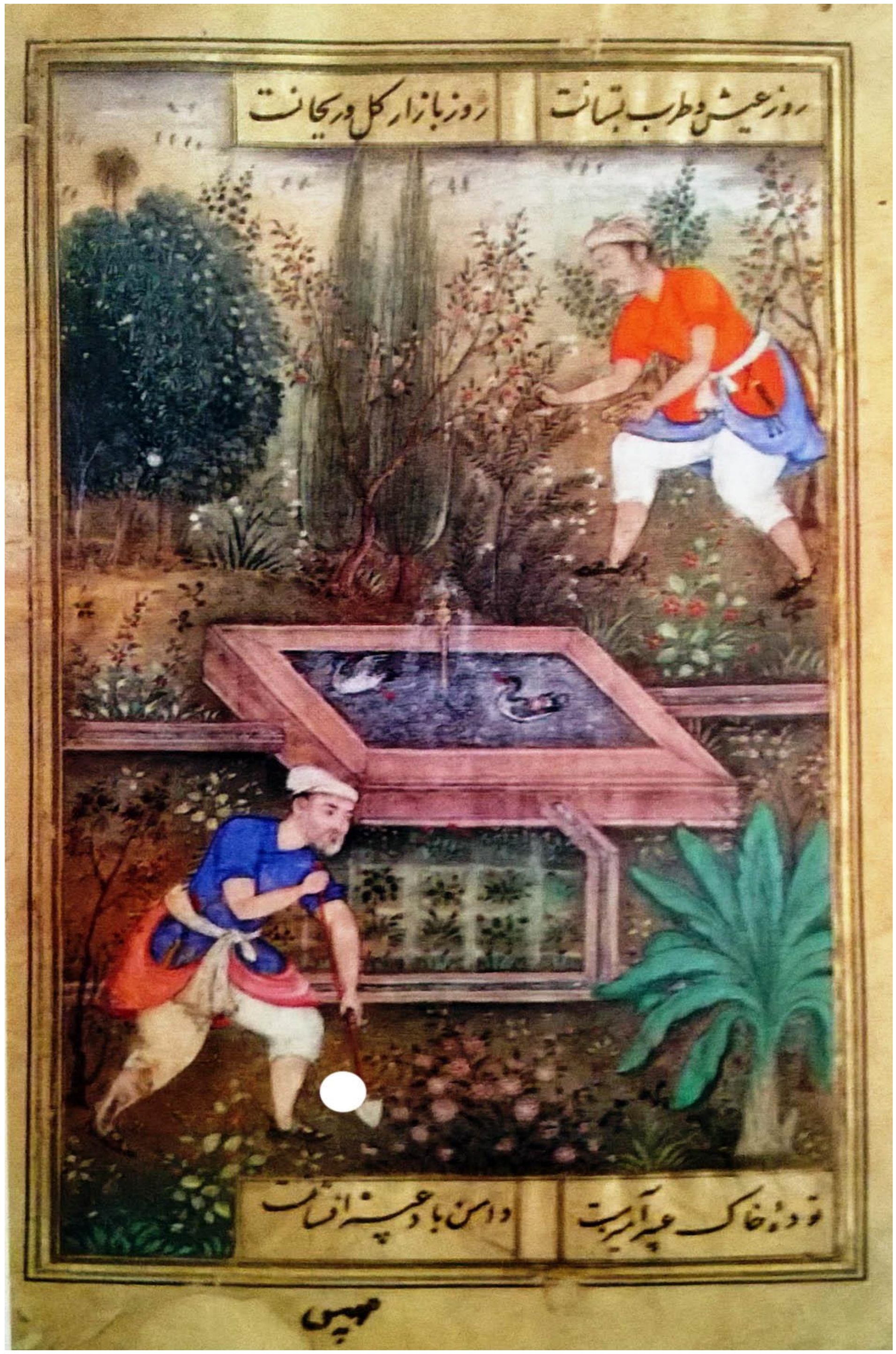
Courtesy: **The Library of A. Chester Beatty**. After, Arnold.

Plate: IV

Tank, water channels and gardeners at work

The miniature painting of sixteenth century (c.1588) work *Diwan-i Anwari*, attributed to Mahesh, depicts the layout of the garden with flowers and trees and its water channels which carry out the water with gravitational pressure. A special feature of this painting is the depiction of gardeners engaged with instruments.

The painting is now preserved at **Fogg Art Museum, Harvard University** and reproduced by Michel Bond and Glenn D. Lowery, *Akbar's India: Art from the Mughal city of Victory,* (N York, 1985-86), Plate No. 27.



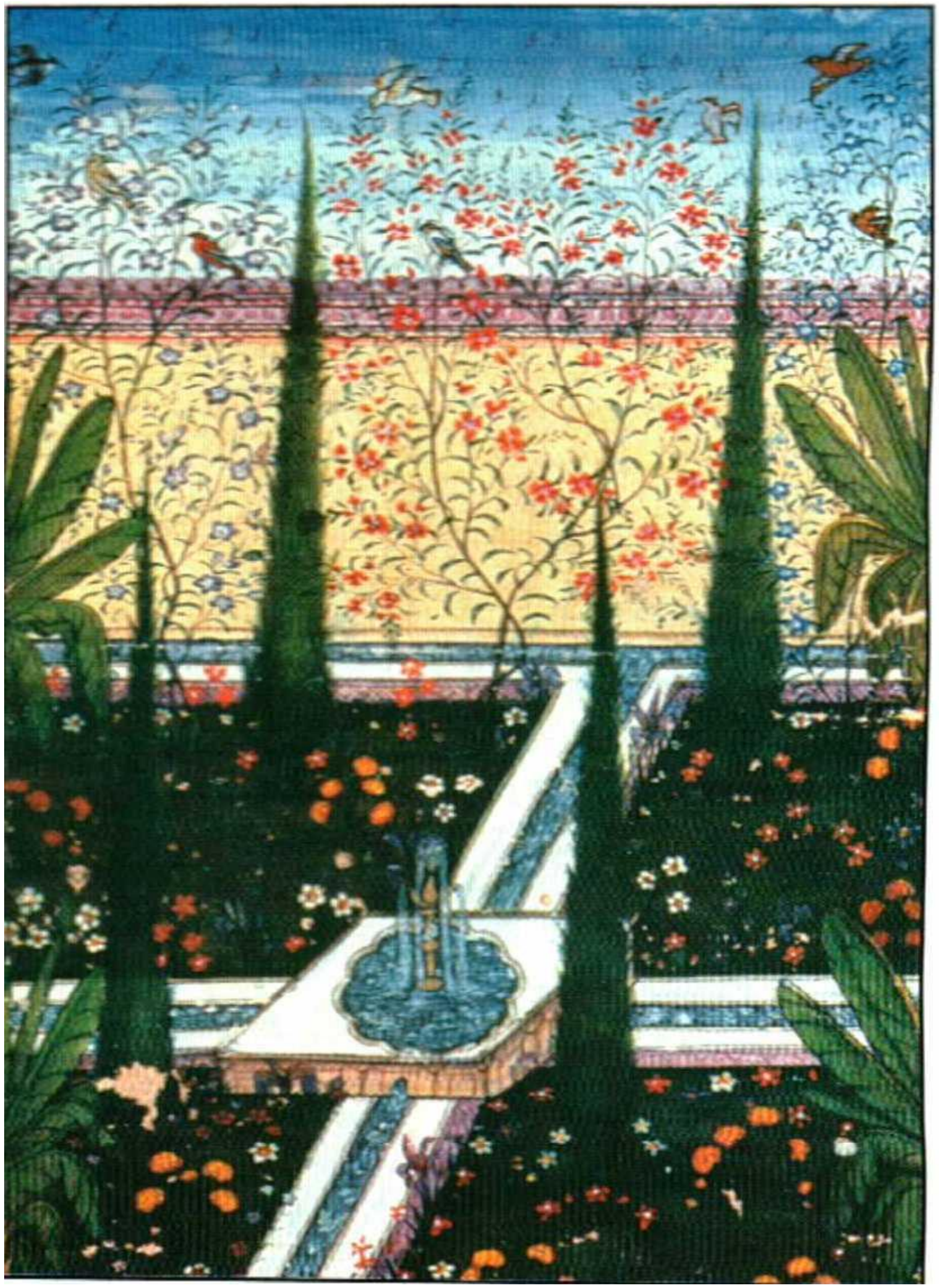
Courtesy: **Fogg Art Museum, Harvard University**. After, Bond & Lowery**.**

Plate: V

Fountain and decorative trees and flowers

A Mughal miniature painting of early seventeenth century (1615-25 AD) of the illustrated manuscript of *Shirin wa Farhad*, by Ghinai showing fountain, water channel, flower beds and four symmetrical cypress and banana trees.

The painting, originally preserved in the **Raza Library, Rampur,** is reproduced by Barbara & Desai, *Mughal and Persian Paintings*, Plate No. 181.



Courtesy: **Raza Library, Rampur.** After, Barbara & Desai.

Plate: VI

Babur supervising gardener's work in *chaharbagh*

The miniature painting of the manuscript of *Baburnama*, by Miskin, executes that Babur was supervising the arrangement of trees. Gardeners were at work with spades and other instruments. Depiction of water channels on line of *chaharbagh* is noteworthy.

The painting is preserved in the **Collection of M. Jean Saustiel, Paris.** Reproduce by Pratapaditya Pal, *Master Artist of the Imperial Mughal Court*, (Delhi, 1991), Plate No. 04.



Courtesy: **Collection of M. Jean Saustiel, Paris.** After, Pratapaditya Pal.

Plate: VII

Babur's *chaharbagh* garden and waterworks

The miniature painting in *Akbarnama* (c.1590), by Bishandas, shows Babur in laying out garden. A man standing before the emperor is holding a rectangular sheet, probably plan of the garden, in his hands. Distribution of water through channels from upper layer to the lower tank and plantation of pomegranate and orange trees along with flower plants are note-worthy.

The painting is now preserved in **Victoria and Albert Museum, London** and reproduced by Ebba Koch, *The Complete Taj Mahal*, p. 25.



Courtesy: **Victoria and Albert Museum, London**. After, Ebba Koch

Plate: VIII

Water tank, water channels and gardeners at work

The miniature painting of *Tuzuk-i Baburi*, illustrated at the time of Akbar, depicts a *Chaharbagh* of Babur with a proper central tank and intersected water channels. Trees of pomegranate, orange, banana and other huge trees along with different variety of flowers and gardeners at work have prominently been depicted.

The painting is now preserved in **British Museum, London** and reproduced from Hamid Suleiman, *Miniatures of Baburnama*,(Tashkent, 1970), Plate No. 24.



Courtesy: **British Museum, London.** After**,** Hamid Suleiman.

Plate: IX

Octagon central pool, flower beds, and cypress trees

A sixteenth century (c.1590) painting, probably from the illustration to a lost episode of *Baburnama*, shows a prince standing in a proper garden on the side of octagonal pool with fountain. A pair of cypress and two other big trees along with flower beds are the main theme of the painting.

The painting is preserved in **British Museum, London,** and reproduced by J.M. Roger, *Mughal Miniatures*, Plate No. 28.



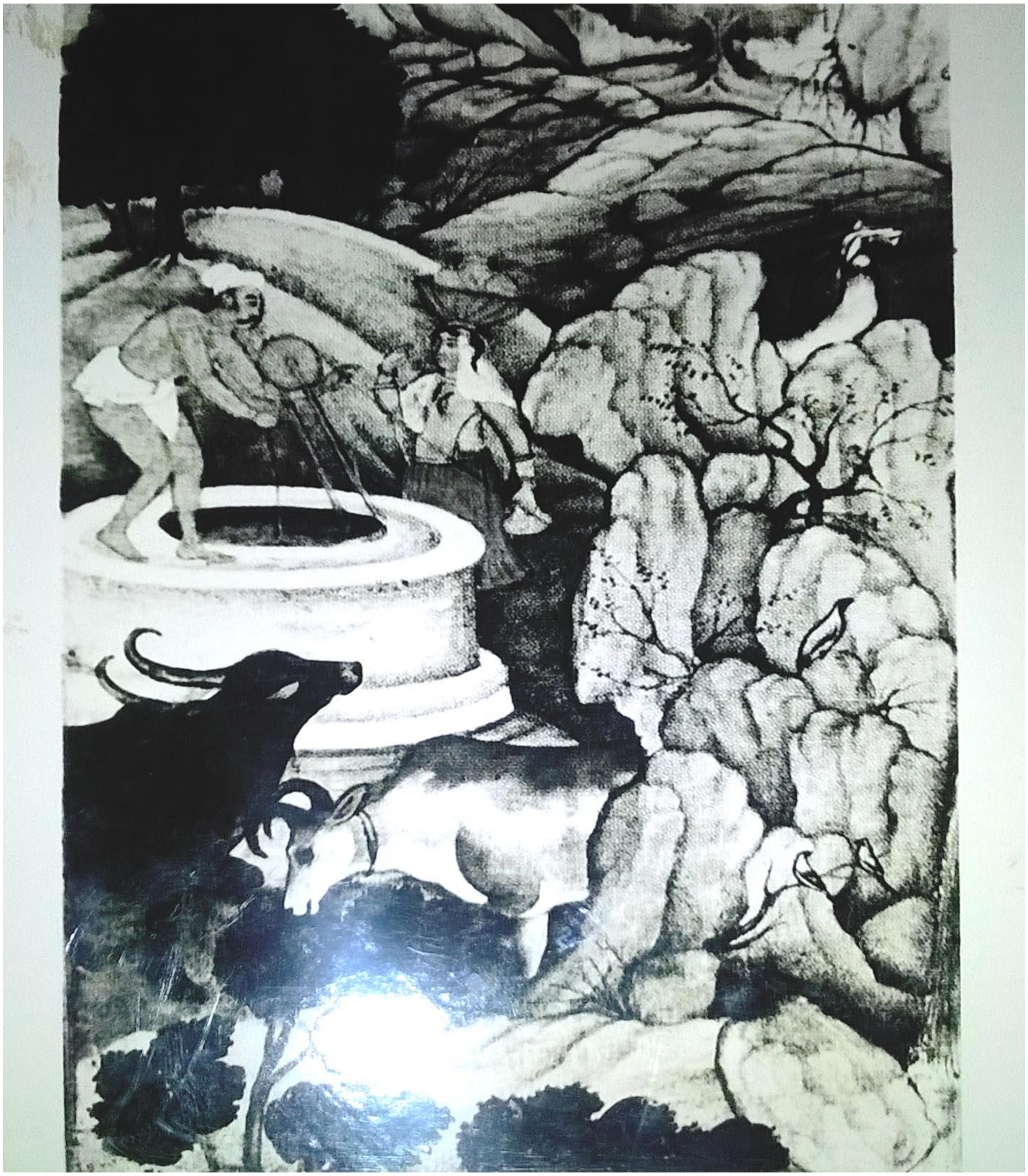
Courtesy: British Museum, London. After, Rogers.

Plate: X

Water lifting device: *Charas* with pulley

The miniature painting of *Anwar-i Suhaili* depicts *charas* with a pulley on a well (probably made of wood) used for fetching water.

Reproduced from **Collected paintings of the Library, Centre of Advanced Study, Department of History, AMU, Aligarh,** No. 7B.



Courtesy: CAS, Deptt. of History, AMU, Aligarh

Plate: XI

Water lifting device: *Noria* or surface wheel

A painting of sixteenth century (1585 AD), painted by Harivansha, shows the water device *noria*, a surface wheel or lever-lift in the city of Dwarka.

The painting originally preserved in **Freer Gallery of Art, Washington,** reproduced from the collected paintings of the Library, CAS in History, AMU, Aligarh, No. 85.



Courtesy: **Freer Gallery of Art, Washington**. After, CAS, Deptt. of History, AMU

Plate: XII

Water lifting device: *Rahent* or Persian Wheel

A painting of 1600 AD, possibly painted by Basawan, depicts the mechanism of Persian Wheel. In the painting ox and mule yoked together at well and fetching the water.

The painting originally preserved in **British Museum, London,** reproduced from the collected paintings of the Library, CAS, Department of History, AMU, Aligarh, No. 20.



Courtesy: British Museum, London. After, CAS, Deptt. of History, AMU.

Plate: XIII

An Aqueduct for distributing water into the garden

In the photograph an aqueduct is running on the top of the wall to distribute the water into the second and third terraces of the Shalamar garden of Lahore.

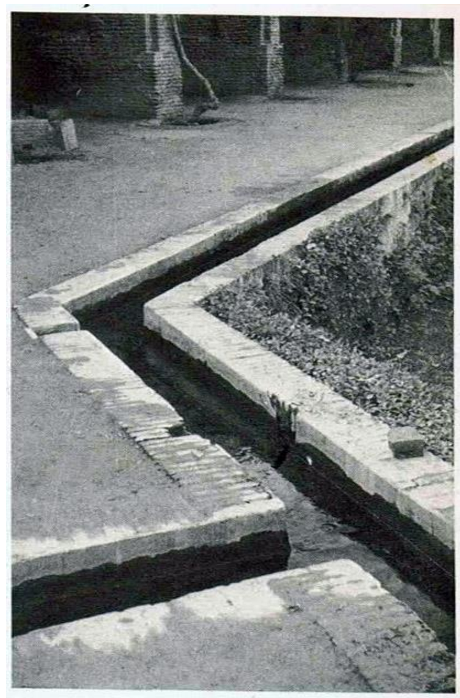
Source: Sylvia Crowe, et.al., p.31.

Plate: XIV

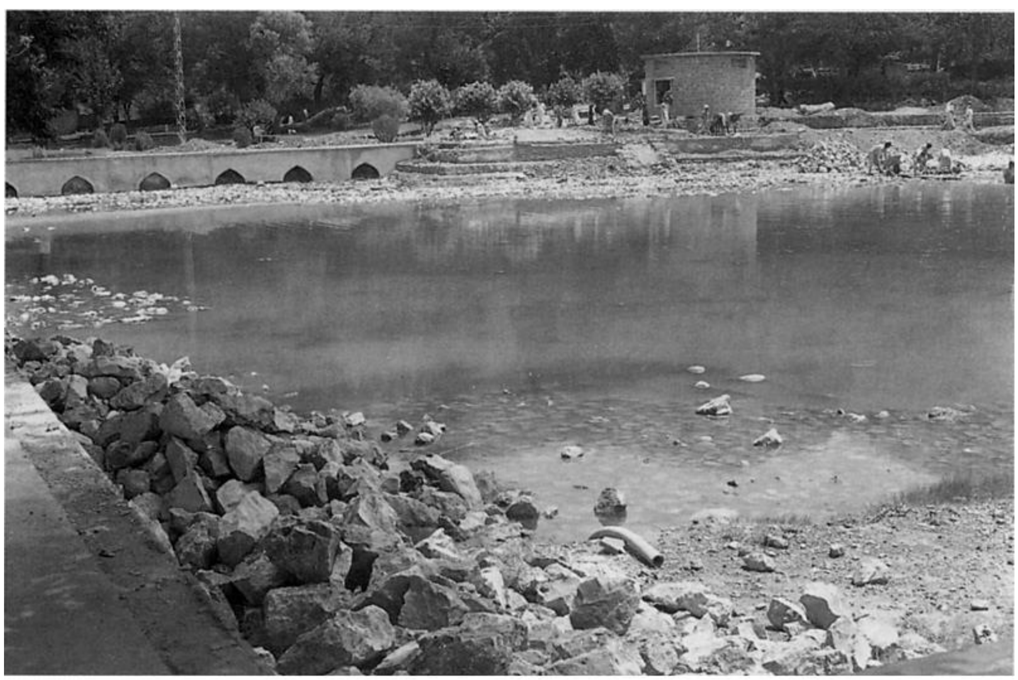
Main tank in the garden of Hasan Abdal

The photograph shows the excavated main tank of the garden of Hasan Abdal which was exceptionally large with seven elegant arches including one blind arch, in which water used to be entered through a single arched channel.

Source: Makin Khan, 'An Introduction to the Historical', op. cit., p. 460.



Courtesy: Sylvia Crowe



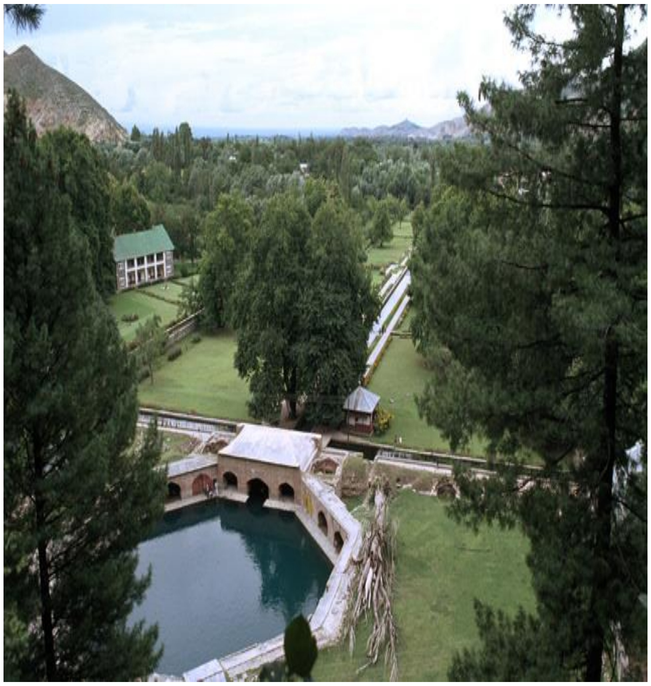
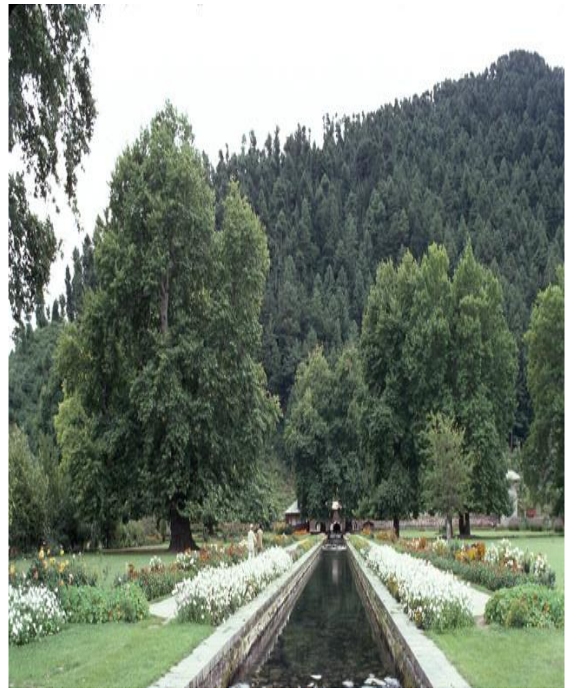
Courtesy: Makin Khan

Plate: XV (A, B, C)

Main octagon spring reservoir and long water canal in Vernag garden

An octagon arched reservoir, originated from natural spring, with domes and niches are shown in the photographs along with its long, straight and deep water canal, which used to discharge into the river Jhelum.

Source: Self-photographed, August, 2014.

Courtesy: Self-photographed, August, 2014



Plate: XVI (A & B)

Water-sheet and black marble pavilion over flowing water with niches (Shalimar, Kashmir)

In the picture black marble floating throne of the emperor above a cascade, *chadar*, with niches (*chinikhana)*, which is roofed, is shown in *diwan-i am* at Shalimar, Kashmir.

Source: Self-photographed, August 2014.



Courtesy: Self-photographed, August 2014



Plate: XVII

White marble pavilion over flowing water (Shalamar, Lahore)

In the photograph open white marble pavilion of the emperor in the garden of Shalamar, Lahore is shown under which water used to flow.

Source: Conan Michel, (ed.), *Perspectives on Garden Histories,* (Washington, 1999), p. 109.



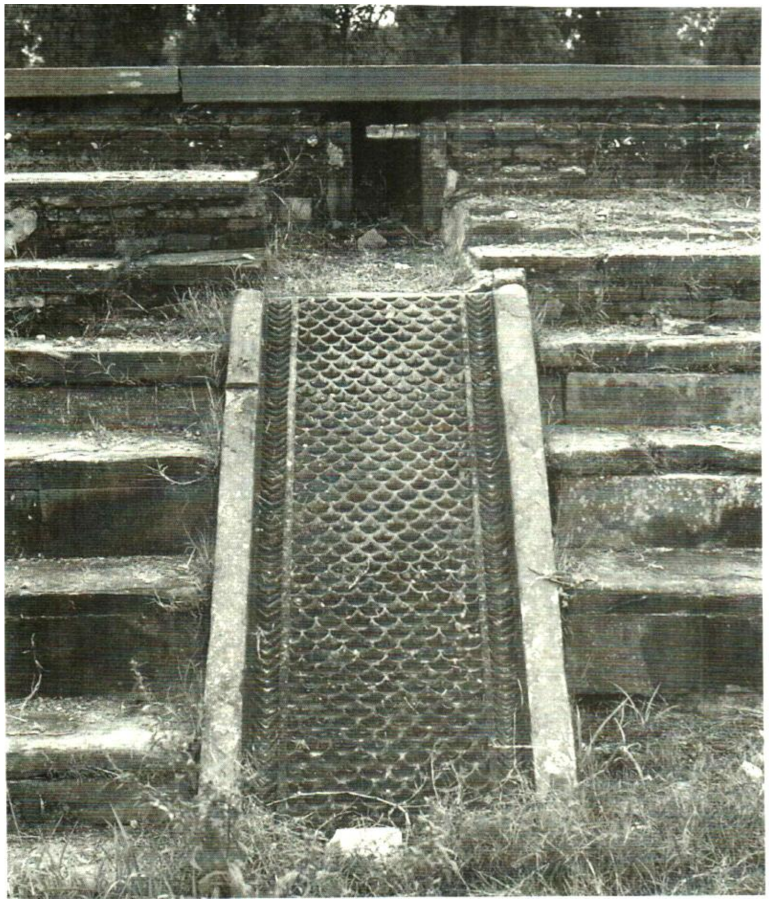
Courtesy: Wescoat

Plate: XVIII

A water chute with fish-scale pattern

The picture shows a marble water chute at Bagh-i Nur Afshan now Ram Bagh at Agra with *mahipusht*, a fish-scale pattern set between steps.

Source: Ebba Koch, *The Complete Taj Mahal*, p. 39.



Courtesy: Ebba Koch

Plate: XIX (A & B)

Water chutes with chevron (zig-zag pattern) on the slight slope

The pictures show that not only in the terraced gardens like Shalimar but even in the plains, in the gardens of Humayun's tomb and Hayat Bakhsh in Red Fort, respectively, with the slightest slope of only one or two feet. Mughals created charming waterfalls in their gardens.

Source: Self-photographed, January, 2015.



Courtesy: Self-photographed, January, 2015



Plate: XX (A & B)

Water-chute

How beautifully and magically the water used to splash on chute from natural spring directly can be seen in the picture of Nishat Bagh, though now the source of water is not the natural spring but the Dal Lake from which water is channelized through pumping set.

Source: Self-photographed, August, 2014.



Courtesy: Self-photographed, August 2014.



Plate: XXI

Terra cotta pipe in the Wah garden

The photograph, taken after the excavation, shows a clear picture of an underground terracotta pipe which separately used to supply water for the fountains to generate the pressure.

Source: Makin Khan, ‘An Introduction to the Historical’, op. cit., p. 468.



Courtesy: Makin Khan

Plate: XXII

Royal pavilion, suburban gardens and musical party with nobleman

The painting is perhaps Deccani, executed at Aurangabad, in the late seventeenth century, depicts the scene in which nobleman is enjoying the musical party by sitting in his pavilion of the palace. Distant waterfront is lines with suburban gardens and pleasure houses. Perhaps, the boats are ferrying the visitors.

The painting is preserved in the **Collection of Haoward Hodgkin, London.** Reproduced from Ebba Koch, *The Complete Taj Mahal*, p. 29.



Courtesy: **Collection of Haoward Hodgkin, London.** After, Ebba Koch.

Plate: XXIII

Shah Jahan's *Farman* for the exemption of garden tax

A *farman,* issued by Shah Jahan to Zafar Khan, governor of Kashmir, engraved on the stone, put into the masonry of the gate of Jami Masjid Srinagar still found, records the order of the emperor that 'no *subedar* should lay an embargo on the fruit or the orchard of the garden of anyone'.

The photograph of the said *farman,* on the left side of the gate of Jami mosque has been taken during my visit to Kashmir in August, 2014.



Courtesy: Self-photographed, August 2014

Plate: XXIV

Gardener busy in his work in the garden

A miniature painting from the *khamsa* of *Nizami* shows physicians in a royal garden before the king who was sitting in a roofed kiosk. The gardener is busy in work with his tool.

The painting, originally preserved in **The British Museum, London,** is reproduced by S.C. Welch, *Persian Painting: Five Royal Safavid Manuscripts of the Sixteenth Century*, (New York, 1970), p. 76.



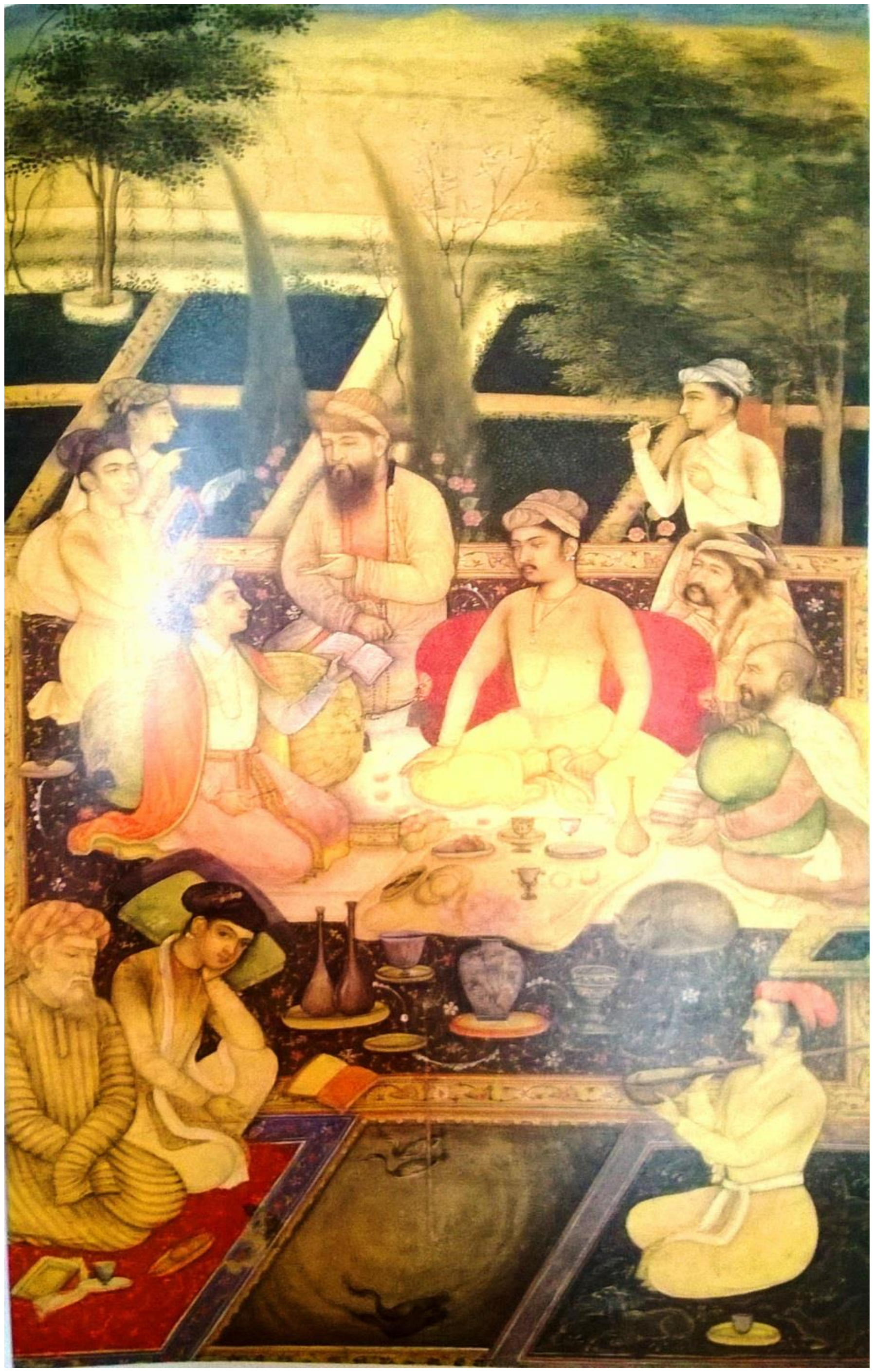
Courtesy: **The British Museum, London.** After, Welch

Plate: XXV

Learned discourse in the garden

A painting of early 17^{th} century (c.1615), painted by Govardhan, depicts two young princes, sitting in an open pavilion of a planned garden with sages and learned men, involved in serious discussion, probably related to religion, as an opened book in the hand of a prince and directive posture of a sage suggest. It also depicts that music and singing was going on in the garden as one singer is shown with his instrument.

The painting, now preserved in **The Library of A. Chester Beatty**, is reproduce by Linda York Leach, *Mughal and other Indian Paintings: From The Chester Beatty Library*, (London, 1995), I, Plate No. 60.



Courtesy: The Library of A. Chester Beatty. After, Linda York

Plate: XXVI

Garden: A meeting place for royal lovers

A seventeenth century painting by Bal Chand depicts a romantic scene in which Shah Shuja with his beloved, probably wife, are sitting in tent pavilion in the garden. Depiction of female entertainer with musical instrument is noteworthy. In the foreground there are white flower beds in rectangles.

The painting, preserved in **Fog Museum of Art, Cambridge,** has been reproduced by S.C. Welch, *Imperial Mughal painting*, (New York, 1978), Plate No. 35.



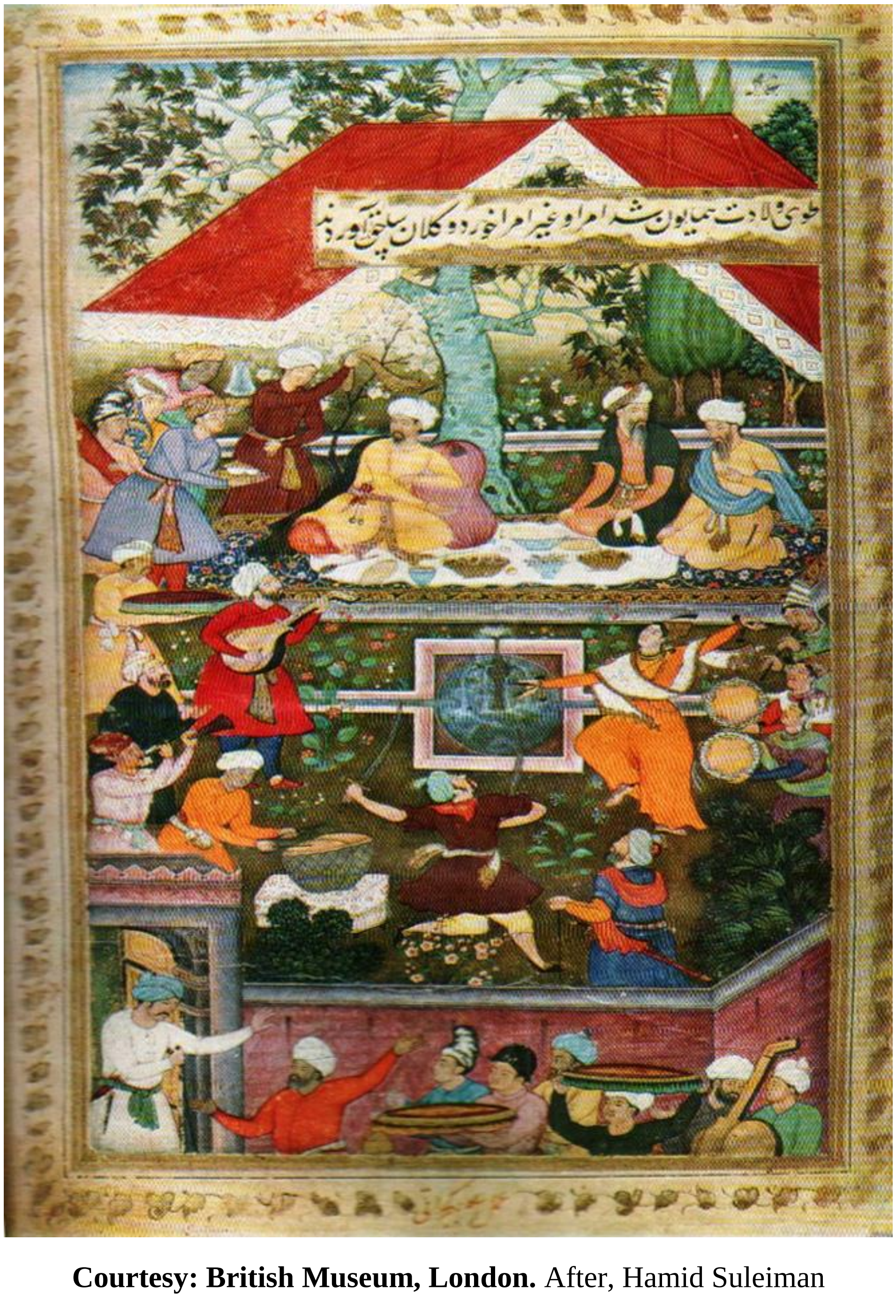
Courtesy: Fog Museum of Art, Cambridge. After**,** Welch

Plate: XXVII

Birth celebration of Humayun in the garden

The miniature painting of *Tuzuk-i Baburi*, illustrated at the time of Akbar, depicts the birth celebration of Humayun by Babur along with the high and low ranked nobles and others in a walled garden. Babur's pavilion was erected under the shady tree, most likely chinar. Painting further shows the arrangement of feast and dance with music in the garden.

The painting is preserved in **British Museum, London** and reproduced from Hamid Suleiman, *Miniatures of Baburnama*, Plate No. 45.



Courtesy: British Museum, London. After, Hamid Suleiman

Plate: XXVIII

Royal *Arghushtak* party in Shar-ara garden

A painting of *Jahangirnama*, attributed to Abul Hasan (c.1607), showing Jahangir seated in a pavilion of Shar-ara garden of Kabul. A celebrated Afghan dance, *Arghushtak*, was in progress, in which the respected men were involved in Sufi *rags* raising hands and clapping in front of a large cooking vessel.

The painting is originally preserved in **Edwin Binney, 3rd collection, San Diego,** reproduced by Asok Kumar Das, *Splender of Mughal Painting*, (Bombay, 1986), Plate No. V.



Courtesy: Edwin Binney, San Diego. After**,** Asok Kumar Das

Plate: XXIX

Painting showing a dance party in the garden

A miniature painting of *Razmnama*, painted in the seventeenth century by unknown painter, depicts *Mridanga* dance with musical instruments in an un-walled garden with water channels, fountain, trees and plants.

Originally the painting is at **Birla Academy of Art & Culture, Kolkata** and reproduced by Asok Kumar Das, *Painting of the Razmnama: The book of War,* (Kolkata, 2005), Plate. 18.



Courtesy: Birla Academy of Art & Culture, Kolkata. After, Asok Kumar Das

Plate: XXX

Humayun met his brother a craggy landscape

A Mughal painting (c.1550), attributed to Dust Mohammad, shows Humayun receiving his brothers in an open and craggy space surrounded by mountainous trees. Women of the household enjoyed among themselves.

The painting originally preserved in **Staasbibliothic Preussischer Kulterbesitz, West Berlin**, is reproduced by Welch, *India Art and Culture:1300-1900*, (N. York, 1985-86), Plate No. 85.



Courtesy: Staasbibliothic Preussischer Kulterbesitz. After, Welch

Plate: XXXI

Poet Hafiz met a prince in the garden

The painting (c. 1610) from the manuscript of the *Diwan-i Hafiz* by Govardhan depicting Hafiz, a famous poet, meeting a young prince in formal parterre garden with fountain and series of water channels.

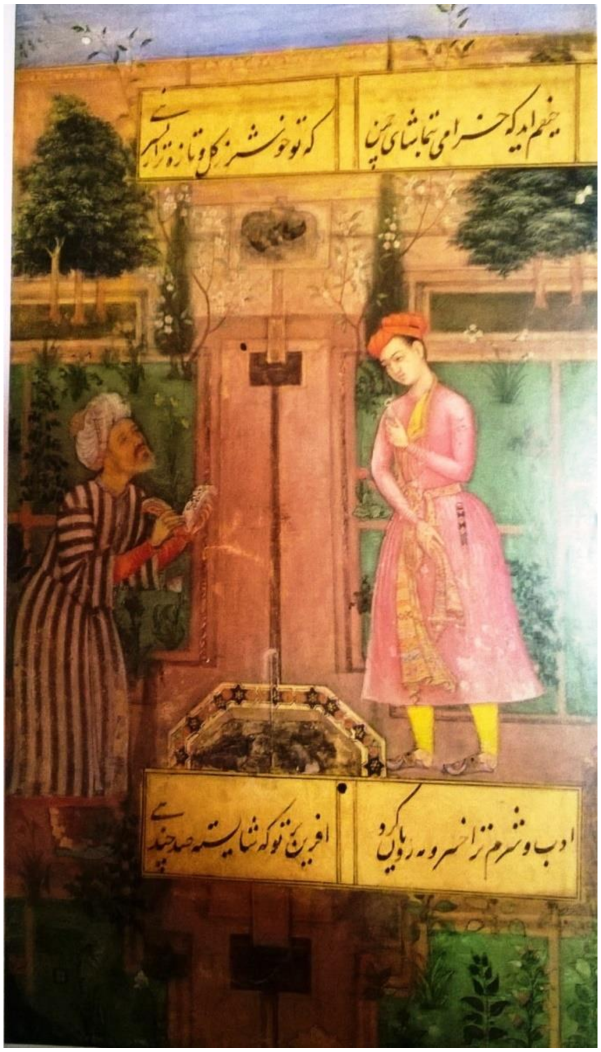
The painting preserved in **Chester Beatty Library** is used by Linda York Leach, *Mughal and other Indian Paintings,* I, Pl. 47.

Plate: XXXII

Poet Sadi and an old man in the garden

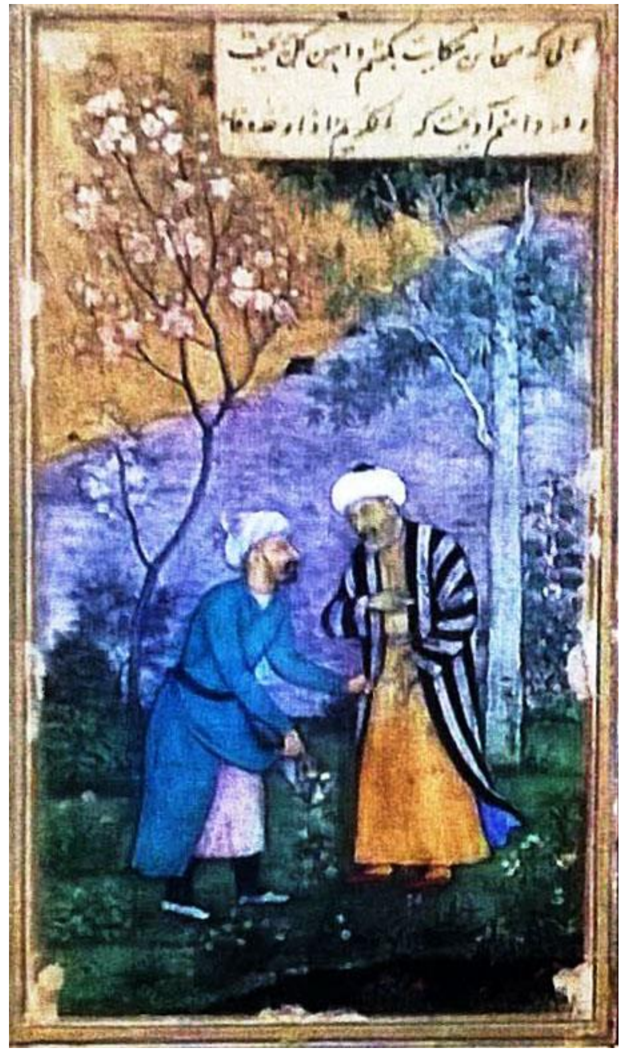
A Mughal painting (c.1640), attributed to Govardhan, from the *Gulistan*, shows Sadi, a renowned poet meeting an old man in the garden full of trees and flowerbeds.

The painting preserved in **Smithsonian Institution, Washington, D.C.** has been reproduced by Ashok Kumar Das, *Mughal Masters: Further Studies,* (Delhi, 1998), Plate No. 10.



Courtesy: Chester Beatty Library

After, Linda York



Courtesy: Smithsonian Institution

After, Ashok Kumar

Plate: XXXIII

Maulana Rumi with his student in a garden

A Mughal painting (c.1610-25) by Mohd Ali depicts the celebrated Sufi poet Maulana Rumi instructing his pupil in an open garden under the chinar tree.

The painting is preserved in **Raza Library, Rampur, India** and is reproduced by Barbara & Desai, *Mughal and Persian Paintings,* Plate No. 42.



Courtesy: Raza Library, Rampur. After, Barbara & Desai

Plate: XXXIV

Emperor with a group of artists in a garden pavilion

A sixteenth century illustration of *Ikhlaq-i Nasiri* of Nasir-ud Din Tusi (c.1590-95) illustrates painters and calligraphers involved in their respective arts in the shade of garden pavilion.

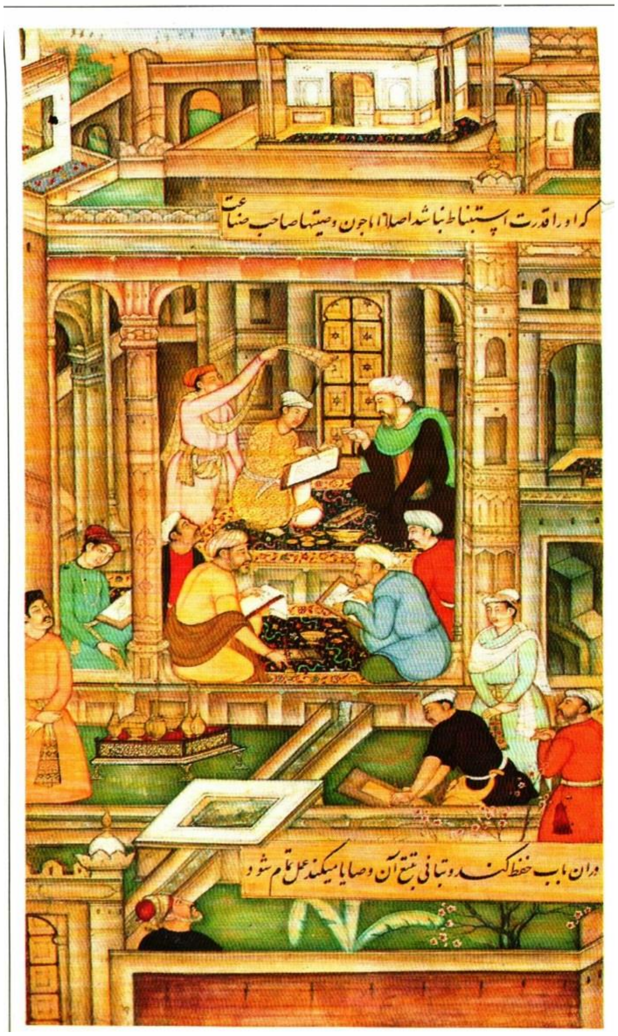
The painting, originally preserved in **Prince Sadruddin Agha Khan Collection, Geneva**, has been reproduced by Amina Okada, *Imperial Mughal Painters: Indian Miniature from Sixteenth and Seventeenth Centuries,* (Flammarion, 1992), Plate No. 3.

Plate: XXXV

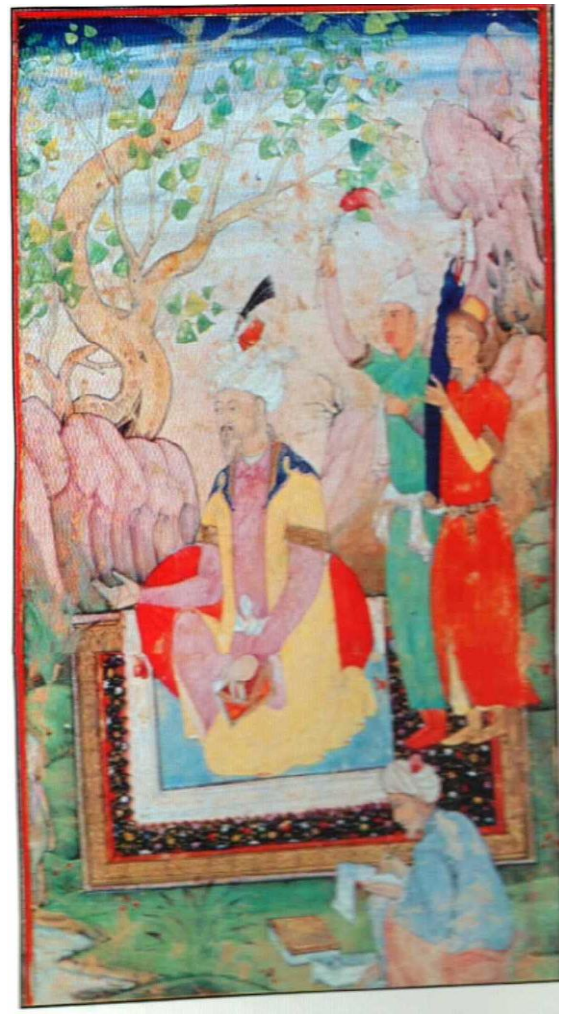
Babur with his secretary in the garden

A seventeenth century Mughal painting shows Babur sitting in a garden pavilion with his secretary or scriber busy in drafting the imperial dictates.

The painting preserved in **Raza Library, Rampur**, **India** has been used by Barbara & Desai, *Mughal and Persian Paintings,* Plate no. 40.



Courtesy: Prince Sadruddin Agha Khan Collection
After, Amina Okada



Courtesy: RazaLibrary,Rampur.
After, Barbara & Desai

Plate: XXXVI

Jahangir embracing Nurjahan in a planted garden

The painting, painted by Govardhan in c.1620, shows Jahangir who has taken Nurjahan in his arms in the presence of two more attendants in a green planted garden.

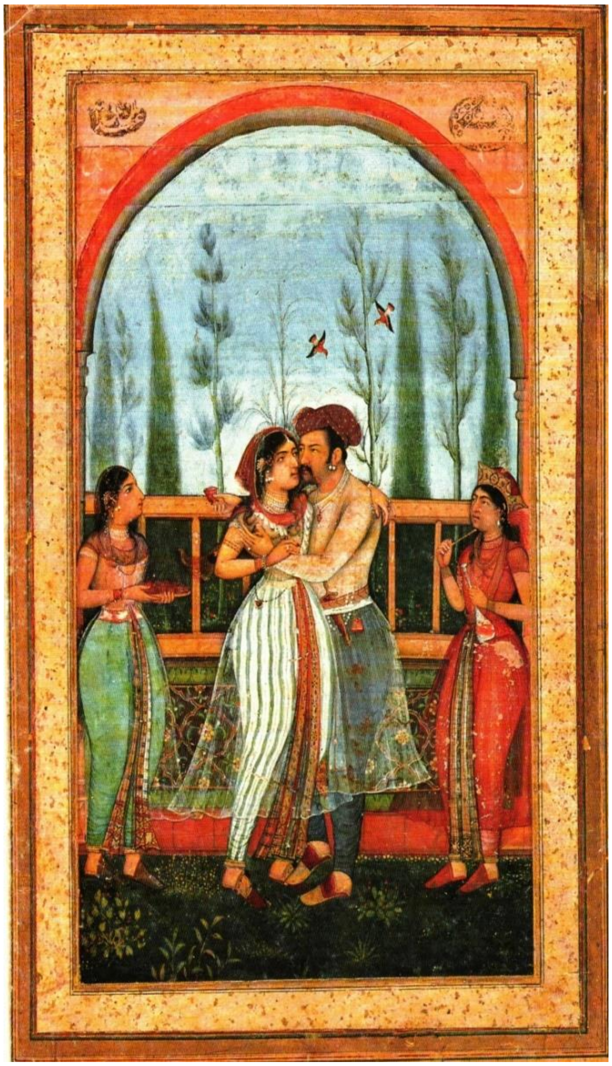
The painting now is in **Los Angles Country Museum of Art** and reproduced by Amina Okada, *Imperial Mughal Painters*, Plate No. 229.

Plate: XXXVII

Jahangir and Prince Khurram feasted in the garden by Nur Jahan

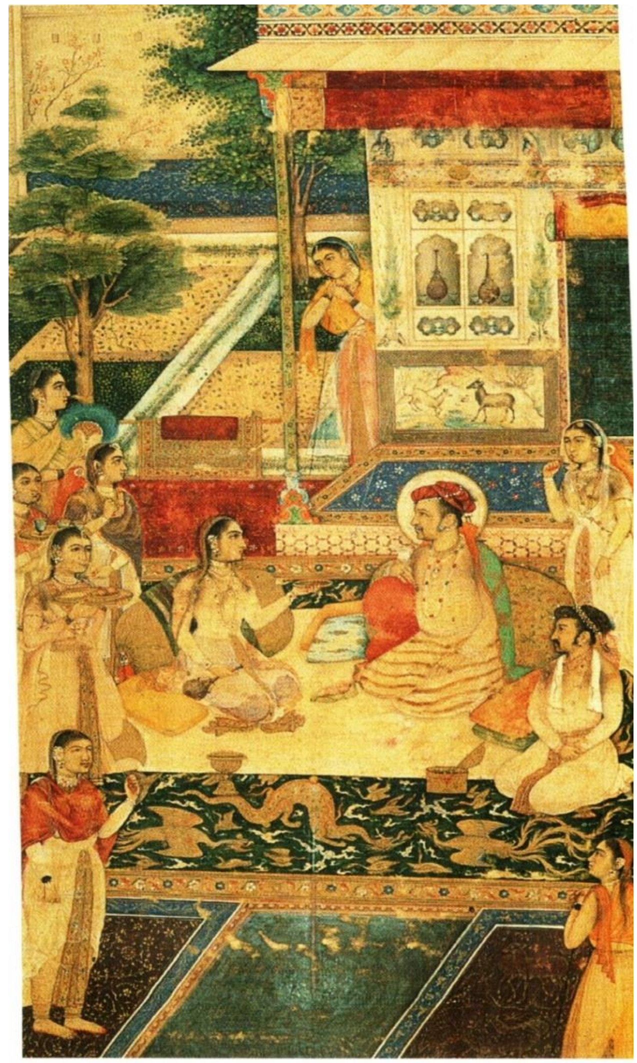
A Mughal painting of 1620s depicts a garden scene in which Jahangir and Prince Khurram are feasted by Nurjahan perhaps in the Nur Afshan garden or Ram Bagh of Agra along with attendant women.

The painting, preserved in **Freerer Gallery of Art, Washington, D.C**. is used from Ebba Koch, *The Complete Tajmahal*, Plate No. 5.



Courtesy: Los Angles Country Museum of Art

After, Amina Okada



Courtesy: Freerer Gallery of Art.

After, Ebba Koch

Plate: XXXVIII

Garden as night club

The Mughal painting (c.1580) depicts a scene of night club in the precinct of a walled garden in which couple met each other and a women sleeping on the flower bed.

The painting is in **Raza Library, Rampur** used by Barbara & Desai, *Mughal and Persian Paintings,* Plate No. 43.



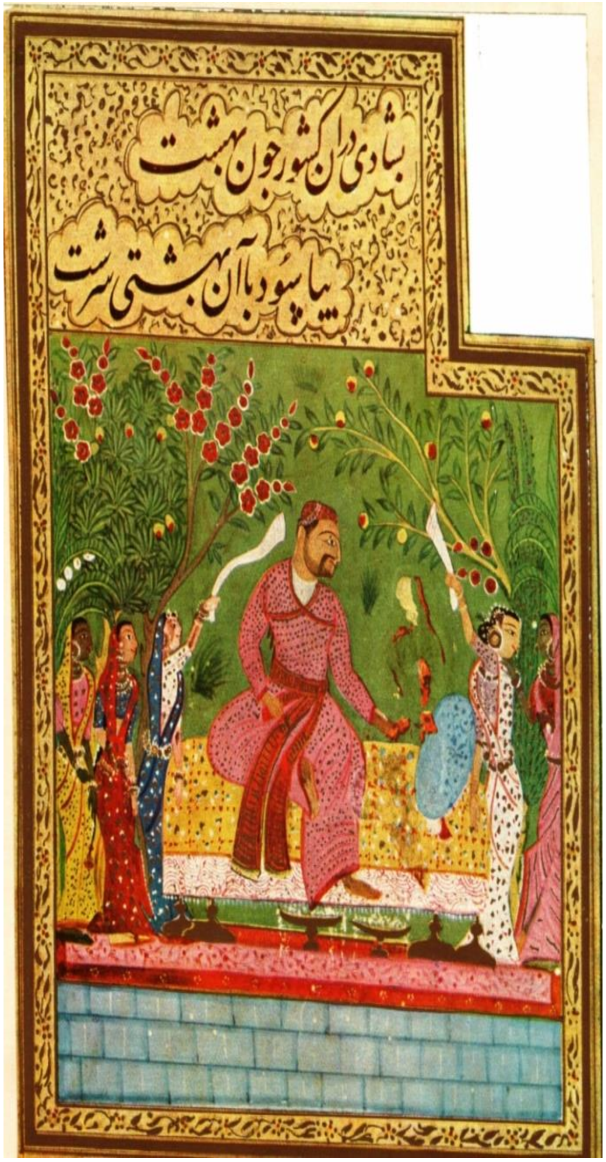
Courtesy: Raza Library, Rampur. After, Barbara & Desai

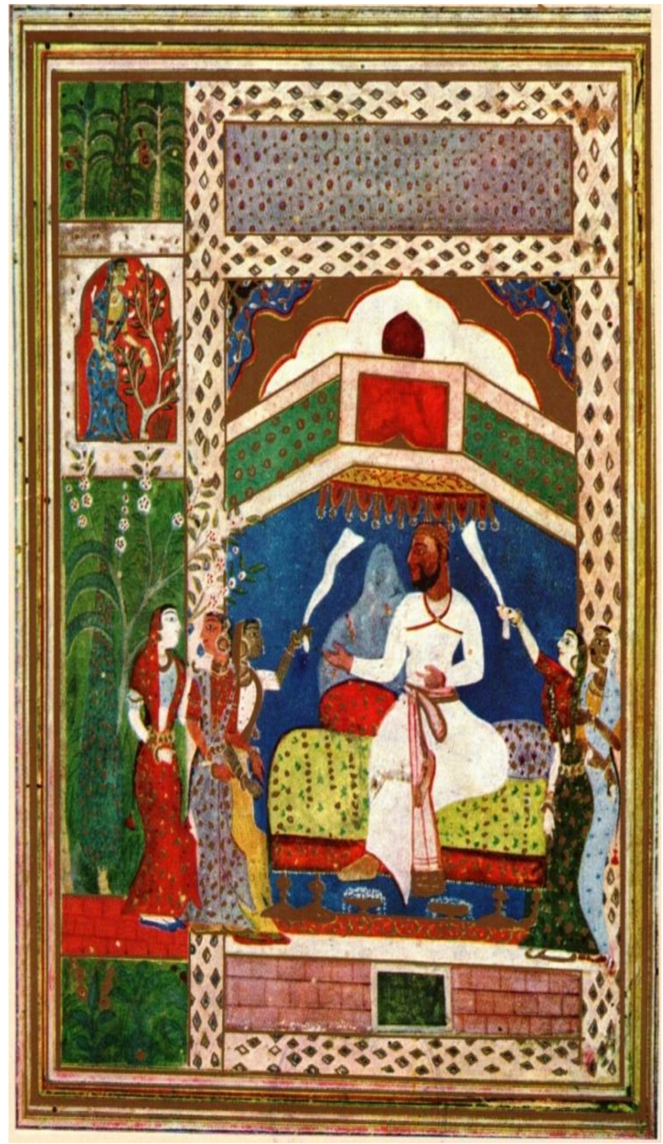
Plate: XXXIX & XL

Sultan Hussain Nizam Shah with his queen in the garden

Two illustrations of the manuscript of Aftabi’s *Tarikh-i Hussain Shah Badshah Dakhan* of sixteenth century depicts Sultan Hussain Nizam Shah enjoying in the pavilion gardens with his queen Humayun, with other female attendants of the *harem,* in the green background of a garden with red flowers and fruits.

The paintings are preserved in **Bharata Itihasa Samshodhaka Mandala, Pune**, reproduced by G.T. Kulkarni & M.S. Mate, (ed. & tr.), ***Tarikh-i Hussain Shah Badshah Dakhan by Aftabi,*** (Original Text, translation and critical Introduction), (Pune, 1987), pp. 98, 104.





Courtesy: Bharata Itihasa Samshodhaka Mandala. After, G.T. Kulkarni & M.S. Mate

Plate: XLI

Wrestling competition in a garden

A Mughal painting from *Gulistan* of Sa'di (c.1567–8) by Shahm depicts a wrestling scene, in which the king is watching with other courtiers a wrestling competition between an old wrestler with his young opponent.

The painting is preserved in **The British Library, London,** reproduced by Norah M. Titley, *Persian Miniature Painting and its Influence on the Art of Turkey and India: The British Library Collections*, (University of Texas Press, 1984), p. 195.



Courtesy: The British Library, London. After, Titley

Plate: XLII

Celebration of Holi in the gardens

The contemporary Mughal painting depicts Shaista Khan of Deccan, a commander under Aurangzeb, playing Holi in a garden where in the background mango trees and flower beds are noticeable.

The painting is preserved in **National Museum New Delhi,** reproduced by M.S. Randhawa, *Indian Miniature Paintings*, (New Delhi, 1981), Plate No. 17.



Courtesy: **National Museum New Delhi.** After**,** M.S. Randhawa

Plate: XLIII

Muhammad Shah's inspection of garden

The painting depicts Muhammad Shah inspecting his garden with his favourite falcon, sitting on his hand, on the palanquin carried out by eight carriers.

It is originally preserved in **Museum of Fine Arts, Boston,** and reproduced by Welch, *Imperial Mughal Painting*, Plate No. 39.



Courtesy: Museum of Fine Arts, Boston. After, Welch

Plate: XLIV

Babur receiving envoys in the garden

The miniature painting from *Baburnama*, a Persian translation prepared for Akbar in1589 AD, painted by Ram Das, shows Babur receiving Persian, Uzbek and Rajput envoys in his garden Ram Bagh at Agra in 1528 AD.

The painting originally preserved in **Victoria and Albert Museum, London** has been reproduced in *Paintings from the Muslim Courts of India-An Exhibition held in the Prints Drawing Gallery, B.M., 13 April to 11 July 1976,* (B. Museum, 1976), Plate No. 24.



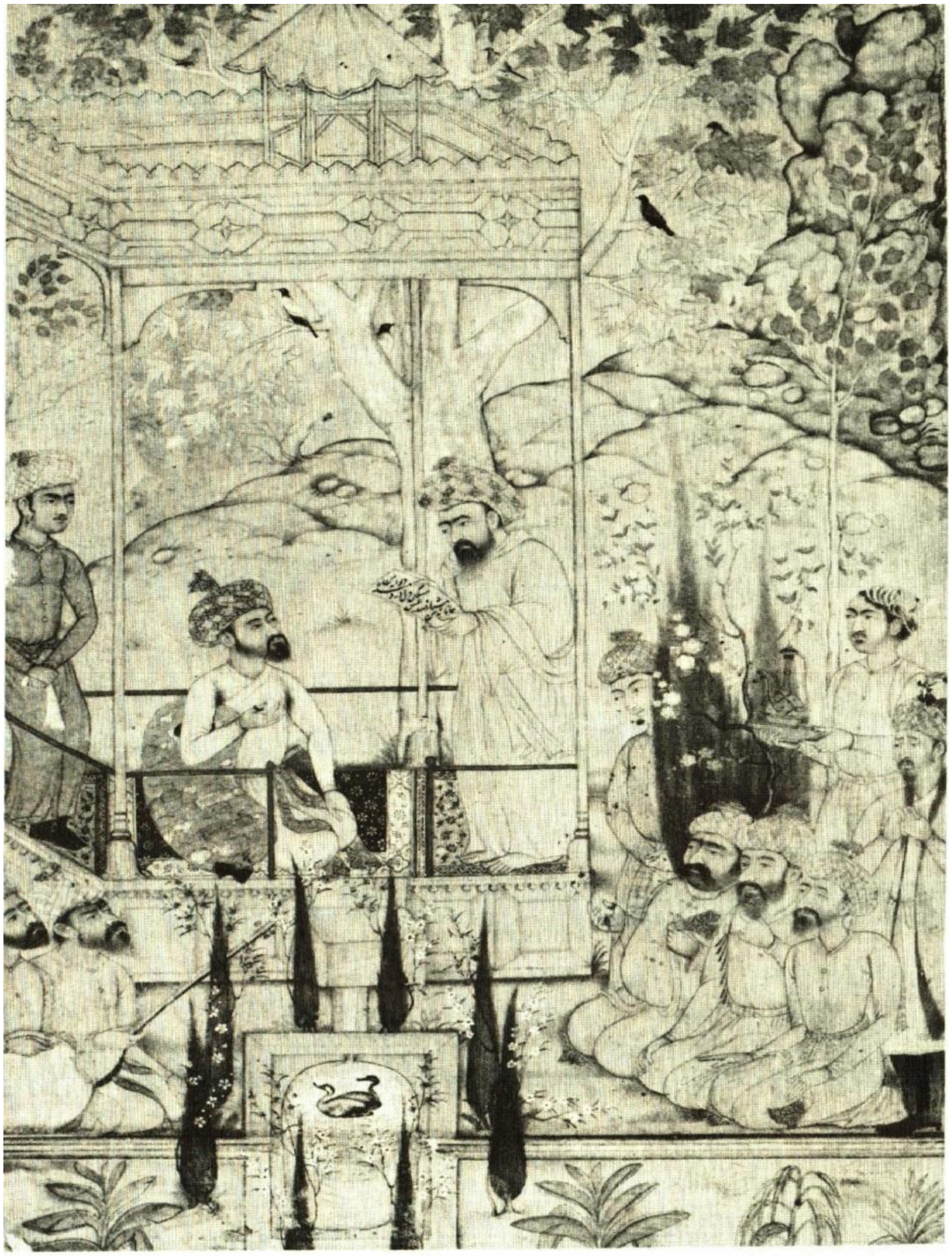
Courtesy: Victoria and Albert Museum, London. After, Welch

Plate: XLV

Babur holding court in garden

This late sixteenth century painting shows Babur, sitting in a well planted garden with his courtiers, holding court and listening to problems attentively.

The painting preserved in **Freer Gallery of Art, Washington, D.C.** has been reproduced by Moynihan, *Paradise as a Garden*, p. 108.



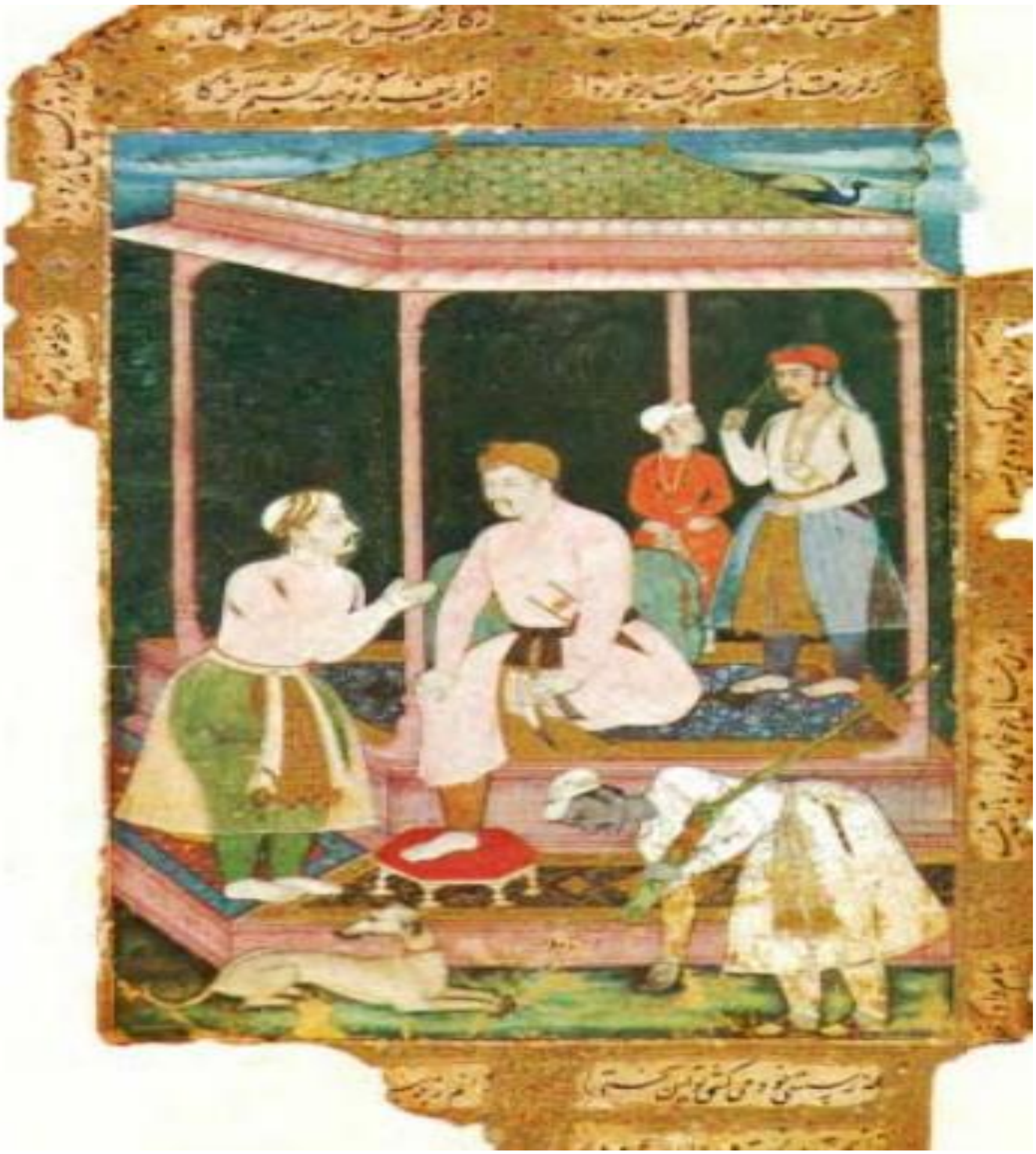
Courtesy: Freer Gallery of Art. After, Moynihan

Plate: XLVII

Akbar engaged with courtiers in a garden

This painting, painted by Manohar Das (c.1604), depicts Akbar listening to a courtier in the garden pavilion.

The painting is preserved in **Cincinnati Art Museum, Cincinnati**, reproduced by Welch, *Imperial Mughal painting,* Plate No. 15.



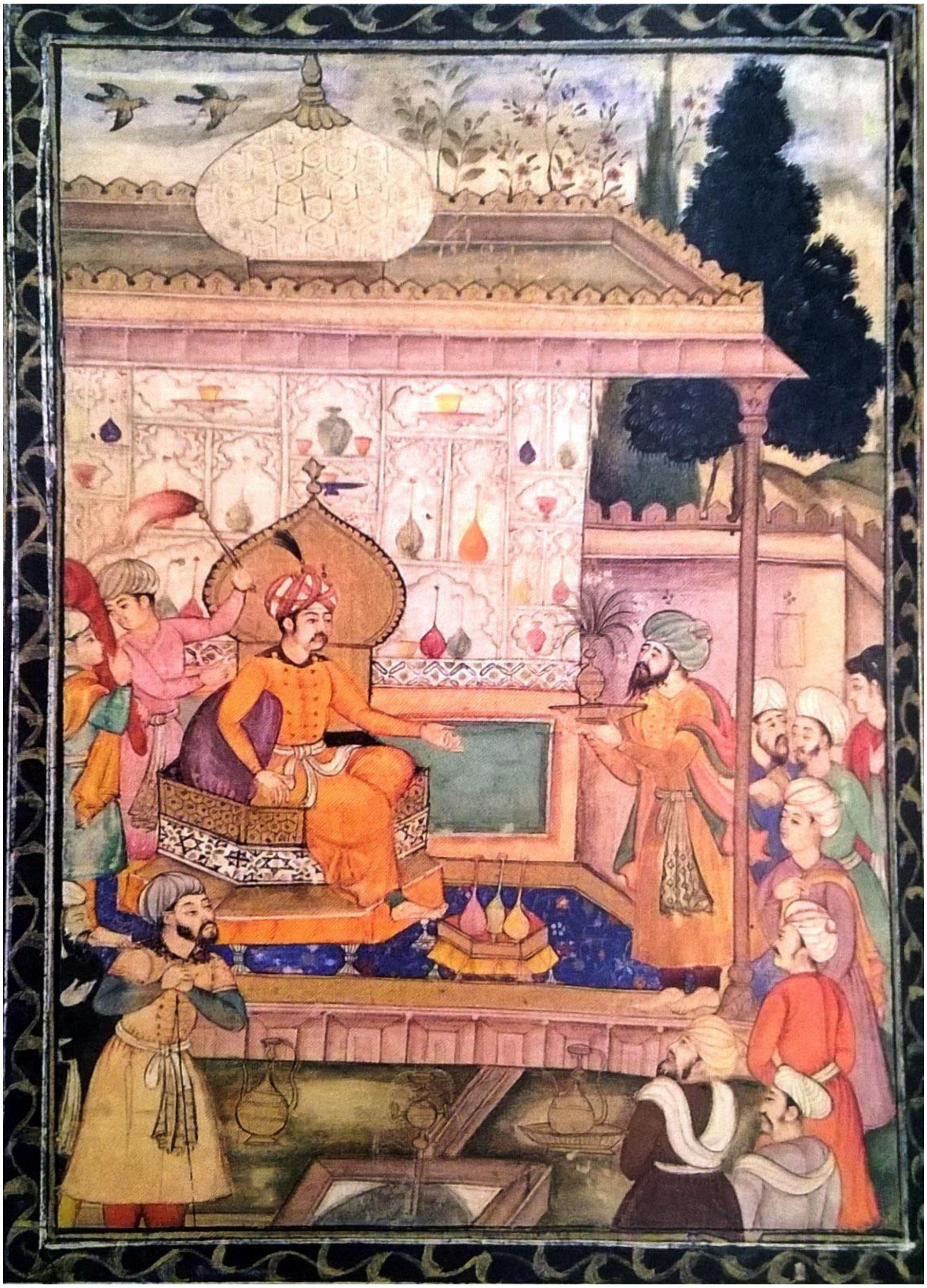
Courtesy: Cincinnati Art Museum, Cincinnati. After, Welch

Plate: XLVII

Holding court in the garden by Mughal noble

Abdullah Khan Uzbek, governor of Mandu under Akbar has been shown as holding court along with courtiers and servants in the pavilion of a garden.

The painting is preserved in **British Museum, London,** reproduced by J.M. Rogers, *Mughal Miniatures*, Plate No.9.



Courtesy: British Museum, London. After, Rogers

Plate: XLVIII

Dispensing justice in the garden

A miniature painting, from *Jahangirnama* by Manohar, depicts a scene of the garden of Mirza Kamran at Lahore where Khusrau has been brought before Jahangir. The emperor dispensed punishment to Khusrau alongwith his two friends.

The painting is in **Raza Library, Rampur**, reproduced by Barbara & Desai, *Mughal and Persian Paintings*, Plate No. 5.



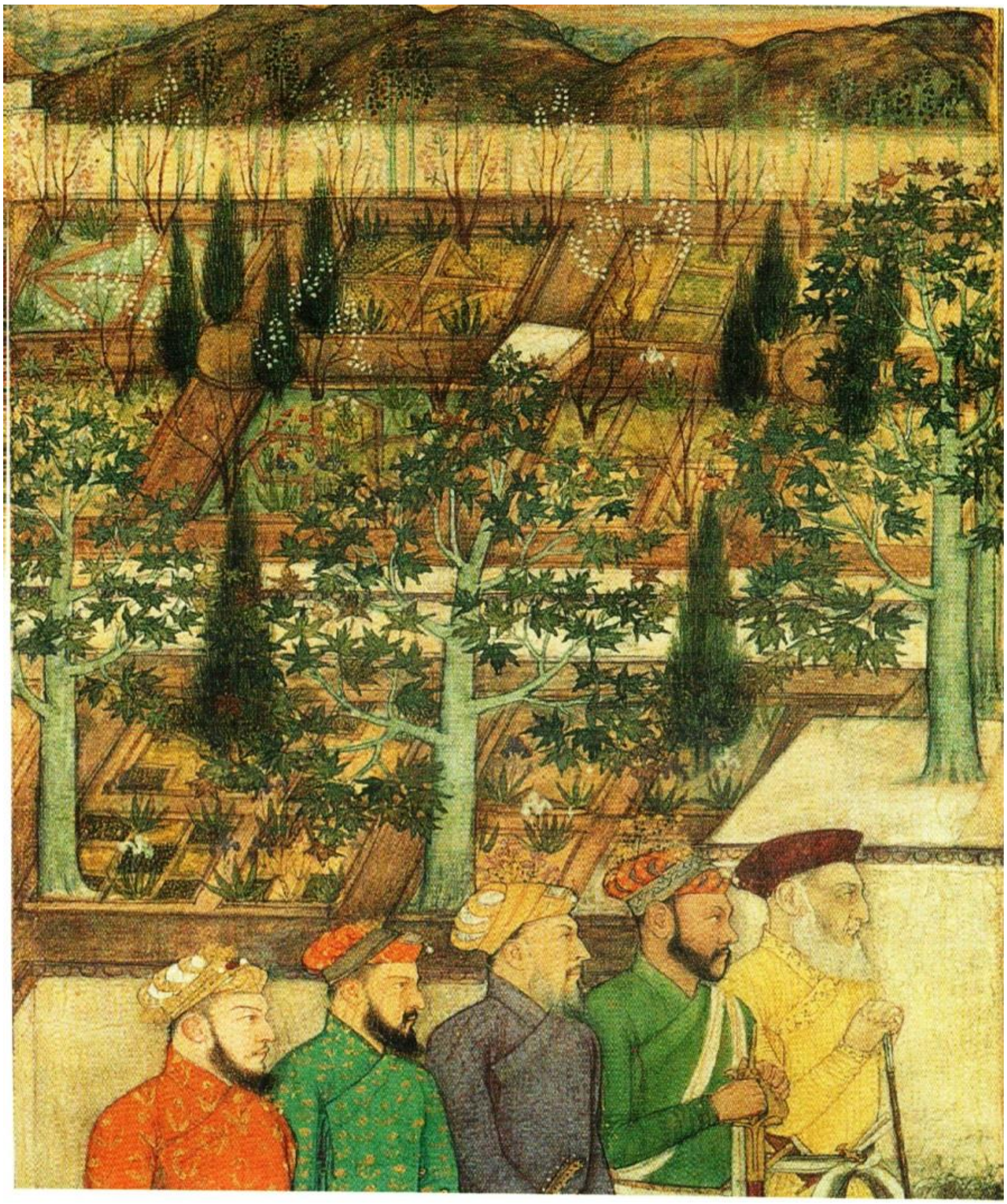
Courtesy: Raza Library, Rampur. After, Barbara & Desai

Plate: LLIX

A hillside garden with chinar and cypress trees

The painting, from the *masnawi* of Zafar Khan (c.1663), shows the garden of Kashmir in which chinar trees have been shown on the walkways and cypress trees bordering the tanks on intersecting point of the channels. Depicting of cypress trees in pairs at one place and making square by two pairs of cypress trees in symmetrical position at two places are noteworthy.

The painting is originally preserved in **British Library, London,** reproduced by Ebba Koch, *The Complete Taj Mahal*, p. 138



Courtesy: British Library, London. After, Ebba Koch

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